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I

THE REPORT OF THE COMMITTEE OF TEN

The report of the Committee of Ten appointed at the meeting of the National Educational Association at Saratoga in July, 1892, together with the reports of the conferences organized by that Committee, has just been issued by the Bureau of Education at Washington in a volume of 250 pages. The work intrusted to this Committee is the first educational research ever undertaken by that Association; its subject—secondary school studies—is an important one; and its method, though previously used in a small way in New England, has never before been tried on the national scale. The results of the labors of the Committee have therefore been awaited with a good deal of interest by the teachers of the country.

The Committee of Ten was fortunately constituted; for its membership represented the Bureau of Education, the two largest universities in the country,—one an endowed, the other a State university,—two comparatively young State universities, a well-established college for women, three public schools, the best endowed preparatory school in the United States, and one of the most influential of the denominational colleges. Four members of the Committee had had much experience in public school systems. The East, the West, and the South were effectively represented. Moreover, the members of the Committee, taken together, had a large personal acquaintance among the teachers of all parts of the country, both in schools and in colleges.

The chief work of the Committee was to organize "a con-

ference of school and college teachers of each principal subject which enters into the programmes of secondary schools in the United States, and into the requirements for admission to college . . . each conference to consider the proper limits of its subject, the best methods of instruction, the most desirable allotment of time for the subject, and the best methods of testing the pupils' attainments therein . . . " Nine conferences were held in the Christmas holidays of 1892; and the reports which those conferences presented to the Committee of Ten make four-fifths of the volume now issued.

These Conference reports contain a great number of recommendations for the improvement of teaching, not only in the secondary schools, but also in the elementary. It will require prolonged study and debate to bring these numerous recommendations home to the daily thought of superintendents and teachers. There is not one of the conferences which does not make suggestions which would affect profoundly both the secondary and the elementary schools; but of course the conferences on the newer subjects, like history and natural history, bring forward the least familiar recommendations. It is noticeable, however, that even the conferences on Latin, Greek, and mathematics make recommendations which would change very much the common mode of dealing with those venerable subjects. The conferences on the scientific subjects, including geography, set forth, among other things, the necessity of providing schools with much better illustrative apparatus for teaching these subjects than they now have, and their recommendations, taken together, seem at first sight to require an expenditure which few cities and towns are prepared to undertake; but on examination it will appear that these expenditures can be spread over a considerable number of years, and so be made practicable for many schools, whether public or endowed. All the conferences are anxious to get better trained teachers, each for its own subject; and it is obvious that the kind of teaching they recommend will require teachers more highly trained than can usually be obtained at present.

It is to be hoped that the teachers of the country will take time to examine thoroughly all the recommendations of the conferences, before they form any opinion as to the feasibility of gradually carrying them into execution. At first sight, several of the reports will seem discouraging, because of the apparent hopelessness of attempting to realize the ideals they describe; but consideration and discussion will lighten the difficulties of the task which the reports set before the directors of American schools, and will show the way to the gradual removal of obstacles which at first seem insuperable.

Naturally enough, each conference undertakes to set a standard for its own subject without considering much the claims of other subjects. It was for the Committee of Ten to compare and correlate the recommendations of the several conferences. This work of co-ordination and correlation the Committee of Ten have attempted to do—with what success can be determined only after wide and long public discussion. The Committee's work was greatly facilitated by the unanimity with which the conferences declared that each subject ought to be taught in the closest possible association with every kindred subject, and that the correlation of each subject with every other was to be strenuously insisted on. The co-ordination of subjects, and the mutual support which the different subjects may give each other, are topics often dealt with by the conferences.

The appointment of the Committee of Ten grew out of action taken in the National Council of Education in 1890–91–92—action in regard to the subject of uniformity in school programmes, and in requirements for admission to college. Recognizing that the desire for uniform programmes in secondary schools, and uniform requirements for admission to higher institutions really prompted in some measure the adoption by the Council and the Association of the conference method which the Committee of Ten were appointed to carry out, the Committee have endeavored to prepare from the reports of the conferences a time schedule of studies for secondary schools, from which can be constructed a variety of

good secondary school programmes, uniform as regards the treatment of each subject admitted to the programmes; and they have further ventured to construct four sample programmes of their own. Perhaps these four specimen programmes will be the first things in the report to which school principals and superintendents will turn; but they are by no means the most important things. The recommendations of the conferences about methods and means of teaching their respective subjects are by far the most important matter in the volume, and will probably give it a lasting value. Scattered through the report of the Committee of Ten there are, however, a considerable number of suggestions and recommendations which have a certain importance. Such are, for example, the declaration that every subject, which is taught at all in a secondary school, should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease; the recommendation that every subject studied at all is to be studied so thoroughly and consecutively that it may provide a substantial mental training; and the suggestions that a certain portion of Saturday morning should be regularly used for laboratory work in the scientific subjects, and that young assistants to the regular teachers should be employed in laboratory and field courses.

All the conferences, except the conference on Greek, found it impossible to treat the subject of secondary school studies satisfactorily without asking for the improvement of elementary school programmes. Indeed many of the most important recommendations of the conferences relate to studies in the elementary schools. In full accord with this action of the conferences, the Committee say that it is impossible to make a satisfactory secondary school programme, limited to a period of four years, and founded on the present elementary school subjects and methods. A good five years' or six years' programme can be made much more easily. They express the opinion that several subjects now reserved for high schools should be begun within the schools now classified as elemen-

tary, or, as an alternative, that the secondary school period should begin two years earlier than at present, the twelve years of the total course being equally divided between elementary and secondary grades.

The Committee clearly desired to establish a closer connection between secondary schools and colleges, and therefore made a general recommendation to the effect that the satisfactory completion of any good four years' course of study in a secondary school should admit to corresponding courses in colleges and scientific schools. At the same time, they make it plain that, in their judgment, a secondary school programme intended for national use must be made primarily for those children whose education is not to be pursued beyond the secondary school.

It is to be hoped that the conference reports and the report of the Committee of Ten will be patiently and candidly discussed in all the various meetings of professional teachers during the coming year—in county meetings, in State meetings, in all the national organizations, and in all the associations which represent groups of States, like the Association of Colleges in New England and the Middle States Association of Schools and Colleges. Both the conferences and the Committee of Ten arrived at a remarkable degree of unanimity in their conclusions; and this unexpected consent among so many experts in education may fairly recommend their conclusions to the favorable consideration of teachers, superintendents, and directors of schools, public, private, or endowed. It will remain for the college faculties to consider whether, within their own sphere, they cannot take action to promote the introduction of the proposed improvements into both elementary and secondary schools. It is true that the measures devised by the conferences and the Committee were not especially intended to promote the interests of the colleges; but nevertheless the closer articulation of schools and colleges is a matter of the utmost importance to the institutions of higher education, and this closer articulation the recommendations of the conferences and the Committee, if carried out, would certainly

promote. The faculties of schools of law, medicine, and science or technology can also contribute to the welfare and growth of the secondary schools by conforming their requirements for admission to one or more of the programmes recommended for secondary schools by the Committee of Ten.

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The first article in the series dealing with the report of the Committee of Ten was written by Dr. William T. Harris, and appeared in the EDUCATIONAL REVIEW for January, 1894.

II

FOREIGN LANGUAGE STUDY IN GRAMMAR SCHOOLS

Every graduate of a well-ordered public grammar school, who has made a good use of his opportunities, should have gained, during his school course, a knowledge of the elementary facts and principles of at least one foreign language; and should have acquired the power to read in that language, with a moderate amount of help from a dictionary, matter that is of interest to him and within the range of his understanding. If his school education is to proceed no farther, the reason for which he should have been brought to the acquisition of this knowledge and this power is the same as that for which he has been taught to read his own language; viz., that he may have, as a permanent possession, a serviceable means of holding communication with his enlightened fellows, of apprehending the thought of authors whose writings interest or instruct him, and so of promoting his own mental, moral, and spiritual growth. Equipped with this instrument, he will have access to two literatures instead of one, will be capable of entering into the feelings and sympathizing with the aspirations of another people besides his own, and thus will have open to him the possibilities of a richer life. He will have learned by personal experience that there are at least two ways of expressing thought, though he may be master of but one, and will readily believe that there may be many others. This knowledge will broaden his horizon and liberalize his mind. It will tend to free him from narrowness, conceit, and bigotry. Even within the limits of his native speech, he will find that, through the comparative method of study in which the acquisition of a foreign language has trained him, his observation has been quickened, his vocabulary enriched, and his power of analysis strengthened.

For the grammar school graduate who is to continue his studies in the secondary school, the early study of a foreign language is important, not merely from the foregoing general considerations, but specifically as a preparation for the work on which he is about to enter. The candidate for secondary instruction, who presents himself already furnished with substantial attainments in one foreign language, may now begin the study of another. This he will do with the certainty not only of strengthening his present powers and resources by the acquisition of a new language, but of mastering this second foreign language with an expenditure of from one-fourth to one-third less mental energy than would otherwise be required, owing to the training he has received in acquiring the first. This statement, that the acquisition of one foreign language facilitates the acquisition of another, will probably not be questioned, and perhaps hardly needs to be supported by testimony drawn from experience. In a certain secondary school, with which I am well acquainted, having a six years' course of study, grammar school graduates are received every year, who, owing to age, previous training, and maturity, are assigned to the third year class except in Latin. They are thus brought into association and comparison with scholars who were admitted to the first year class in the same school, two years before, from the middle of the grammar school course, and who, during these two years, have been studying Latin. The two sets of pupils begin algebra and French together, the grammar school graduates being on the average six months older than the pupils with whom they are thus brought into comparison. In algebra there is no appreciable difference in the quality of the work of the two divisions or the rapidity of their progress; but in French the difference is marked from the outset, and is decidedly in favor of those who have had the training in Latin.

At what stage, then, in the grammar school course should the study of a foreign language be begun? If I were asked to fix, irrespective of local conditions, the point in a school course at which the study of a foreign language should be begun, I

should say, "As soon as the pupil is mature enough for stated lessons in the elementary classifications and principles of English grammar"; *i. e.*, midway in the prevailing grammar school course. It is well known that it is possible for a very young child, intrusted to the care of a French nurse, or accustomed to the companionship of French children, to acquire in a short time the ability to understand French when spoken, and, by a process of unconscious imitation, to acquire facility in speaking it. This sort of facility, however, carries with it no training, and vanishes completely when the conditions under which it was acquired cease to exist. Moreover, the process by which it is acquired tends to vitiate the native speech. It would be dangerous to build a system of instruction on erroneous inferences drawn from such cases as this. Knowledge acquired through unconscious imitation lacks the element of training and confers no permanent benefit. From the beginning there should be intelligent recognition of the facts and principles of the language studied, and not mere practice for the ear and tongue. As the reason and judgment must be brought into service, the time for a fruitful beginning in the study of a foreign language coincides with the time for a fruitful beginning in the systematic study of elementary English grammar.

At this stage, moreover, the organs of articulation are less rigid and more responsive to training than at the beginning of the secondary school course, so that the difficulties of mastering the foreign pronunciation are less serious. Coincident, too, with the greater pliability of the organs of articulation, is the greater docility of the spirit of the pupil. Indeed, the supreme difficulty in the way of the complete appropriation and genuine reproduction of the foreign sounds, the self-consciousness of the pupil, is as yet practically non-existent. The *child* will throw himself with heartiness into the work of reproducing strange sounds where the *youth* will be restrained by self-conscious diffidence. Elementary work in a foreign language, then, whether viewed objectively from the nature of the matter studied, or subjectively from the attitude of the pupil's mind, should be begun not later than the age of twelve years.

Most of what has been said up to this point applies in a measure to all foreign languages, whether modern or ancient, living or dead; but what has been said about the proper time for acquiring foreign sounds applies with especial force to modern languages, the present pronunciation of which, being fixed and known, is, though difficult of acquirement, supremely important. This leads to the question, "Which foreign language, if the choice is to be limited to a single one, should be chosen for the grammar schools of those parts of the United States in which no one foreign element greatly predominates in the population, and in which therefore only purely pedagogical interests have to be considered?"

If an ancient language were to be selected for incorporation in the grammar school course of study, the language chosen would by universal consent undoubtedly be Latin. But there are cogent reasons for holding that a modern language is preferable to an ancient as the basis for the foreign language work of the grammar school. The modern foreign languages—at least the only ones that concern us in the present discussion—are relatively analytic in structure, and have a word order closely resembling our own. In these two important respects they differ radically from Latin, and by the full extent of this difference they are easier for an English-speaking person to master. The subjects, too, with which they deal, the channels in which the thought flows, the illustrative material employed, in brief, the whole setting, is modern, and therefore more intelligible to moderns; and as, in arranging a school course in English literature, we reverse the chronological order, beginning with Irving, Longfellow, Whittier, Lowell, Bryant, and Holmes, and ending with Chaucer, so, too, in obedience to the same law of procedure, from the known to the unknown, from the simple to the complex, we should begin our foreign language work with a modern language. Again, there is a whole body of literature in the modern languages distinctly suited to the young, if not expressly written for them; whereas, if there ever was such a literature among the Romans, it no longer exists. Finally, if we must choose between an ancient and a

modern language, we cannot afford to neglect considerations of utility; and surely no argument is needed to show that, for actual use in the life that now is, the claims of the modern languages are immeasurably superior to those of Latin.

In the selection of a modern language as the basis of the foreign language work in the grammar school, our choice will undoubtedly lie between French and German as the languages of the foreign nationalities with which we have most to do, from which we have most to learn, and with whose literatures we are most in sympathy. In choosing between French and German, we should, I think, prefer French for several reasons.

In the first place the French vocabulary presents fewer difficulties to an English-speaking person than the German. The less familiar and more difficult part of our own vocabulary, including abstract terms and the words which belong to the language of books and the intercourse of the cultured classes, is historically of French origin, and therefore largely common to French and English. A casual glance at a page of French will illustrate what I mean. Compare, for example, the following groups:

English	*French*	*German*
judgment	jugement	Beurteilungskraft
science	science	Wissenschaft
art	art	Kunst
observation	observation	Beobachtung
attention	attention	Aufmerksamkeit
history	histoire	Geschichte
courageous	courageux	mutig
courtesy	courtoisie	Höflichkeit
respectful	respectueux	ehrerbietig

Again, French, particularly in its nouns and adjectives, has fewer inflected forms than German. In this respect, indeed, German approaches Latin in difficulty. German style, too, is much more ponderous and obscure than French style. The French have a maxim to the effect that whatever is not clear is not French, and this maxim faithfully expresses the ideal and the aim of French writers. So marked indeed are the differences between the two nationalities in this direction that

one might rationally enough urge, as a reason for giving the preference to French in a school course of study, the reflex action it might be expected ultimately to exercise on the pupils' English style.

It is true that the French idioms present greater difficulty than the German, but idiomatic expressions in foreign languages have to be taken largely on trust and mastered by the memory; the investigation of their history and the appreciation of their complete inner meaning are the work of the professional scholar rather than of the tyro.

An experience of fifteen years in the city of Boston enables me to say that the preference here accorded, on pedagogic grounds, to French as the foreign language best adapted to the powers and needs of grammar school pupils, coincides with the preference which would be expressed on other grounds by the parents and pupils of that city if the decision were left to them. Under the course of study of the Boston Girls' High School, for example, the pupils, on entering the school, are allowed to elect French, German, or Latin as their foreign language; and, year after year, with but slight variation, the number electing French is to the number electing German as three to one. I have been informed, however, by persons having large acquaintance with the school systems of western communities, that the preference of parents and pupils in those communities is strongly in favor of German.

But assuming that the desirableness of introducing a foreign language into the grammar schools is admitted, and that the adaptation of French to the purpose is conceded, it may be asked, "Is the introduction of the study of French into those schools practicable?" or, to put the question in another way, "How can room be made for French in the course of study, and by whom shall it be taught?" Indeed, whichever foreign language be selected, the question of feasibility is the first question that confronts us and the last question that we can afford to leave unanswered.

To the question "How can room be made for French in the course of study?" my answer would be, "Remove from the

grammar school course of study the whole subject of English grammar and so much of the details of geography, besides, as it may be necessary to remove in order to provide for the study of French, in the aggregate, four hours a week in each of the last three years of the course."

There are many intelligent persons whose opinions on questions with which grammatical analysis and parsing are supposed to deal specifically, are quite as valuable as the opinions of most teachers of those subjects, and whose opinions on questions of historical grammar are much more valuable, who have never studied the English grammar of the schools at all. They have been trained to a nice sense of grammatical propriety and a ready recognition of the relations of thought through the systematic study of the structure of other languages than their own, accompanied by the incidental study of the resemblance and differences existing between the foreign constructions and those of their native speech. Here we have a hint of the possibility of substituting for the direct study of English grammar the more fruitful and interesting comparative study of it which naturally, one might almost say inevitably, enters into the acquisition of a foreign language.

French, for example, contains all the parts of speech that are to be found in English. These parts of speech, too, have the same properties; as, gender, number, person, voice, tense, mood, etc. Some of these properties, as gender and mood, play a much more important rôle in French than in English, and for this reason seem more real to the pupil. Those features, indeed, which are not common to the two languages, as the manner of expressing the possessive relation and the use of the subjunctive mood, become striking and impressive by mere force of contrast, and so gain a firmer hold on the mind. The process of carrying a verb form through the slight changes of inflection which characterize the different numbers and persons in English is uninteresting and monotonous, if not sometimes stupefying, to an English-speaking child, who uses most of these forms correctly by instinct; whereas, when these forms are employed as a practical means of acquiring and conveying

the meaning of the corresponding forms in a foreign tongue, their value as instruments in the attainment of a desirable end is at once recognized, and the monotony of the required repetitions ceases to be wearisome. What better way is there, for example, of teaching the proper use of "shall" and "will," "should" and "would," than to require of the pupil, when he is learning the paradigms of the French verb, a correct English translation of the declarative and interrogative forms of the future tense and the conditional mood? What better kind of training in English composition is there—I do not say that it is the only desirable training—than written translation from a foreign language, in which, the thought being understood, the pupil addresses himself to the task of expressing it in the best possible form?

The teaching of English grammar through the medium of a foreign language is a process that has long been familiar in certain secondary schools, both public and private, in Boston and vicinity—the so-called Latin schools—because pupils are admitted to the lowest class in these schools with no knowledge of technical grammar. The essentials of English grammar have to be taught to such pupils as a means of making the Latin forms and constructions intelligible; to the non-essentials no attention whatever is given. Unfortunately the course of study in these schools, for other than pedagogic reasons, which need not be referred to here, prescribes the wrong order of succession for the two foreign languages assigned to the earlier part of the course. The pupils begin Latin first and French afterward. This order should be reversed. It is often said that a knowledge of Latin is helpful in the acquisition of French, because French was developed historically from Latin, and is therefore closely allied to it. This is true; but, for the same reason precisely, a knowledge of French is helpful in the study of Latin; and it is a sound law of pedagogy which prescribes that the simple and relatively easy should precede the complex and relatively difficult. If the true order should be adopted in the grammar schools, the conditions which now furnish some excuse for the false procedure of the Latin

schools would be removed, and the way to reform for these schools also would be open.

As to the feasibility of reducing the amount of work now required of the grammar schools in the technical details of geography, I will make no specific recommendation, but will merely indicate what is thought sufficient in this department in an endowed school of high standing that is subject to no control beyond that of its principal, its board of trustees, and the established laws of pedagogy. Boys are permitted to enter this school at the age of eleven years, and in most cases do enter the lowest class at the age of twelve. The requirement for admission in geography is: "a knowledge of the most important and (to children) interesting parts of geography with outline map-drawing, from memory, of the Atlantic States and of the western and southern countries of Europe. Approximate accuracy is all that is expected in map drawing. 'Our World' will serve to indicate the kind of knowledge considered necessary." After admission physical geography is studied from January 3 to April 3 two hours a week, and from April 12 to May 1 four hours a week, during the first year only of the six years' course. From this time forward geography, as a distinct study, disappears from the course, and is pursued afterward merely as an aid in the study of history.

But granting that the time here demanded for French could be allowed, how are the teachers to be provided? To this question it might perhaps be a sufficient answer to say that, for schools in which the regular teachers, by making special preparation, have responded successively to new demands in singing, drawing, elementary science, and physical training, there will probably be no greater difficulty in securing, within a reasonable time, adequate preparation in this department also; but, as I am by no means sure that all these added subjects have been well taught by the overburdened regular teachers, I am more inclined to say that the introduction of French into the grammar schools would probably necessitate the adoption of the departmental system of teaching, so far at least as the assignment of English and French, and these sub-

jects only, to the same regular teacher, should be called an adoption of the departmental system.

One hour of the four hours here demanded for French must, of course, be spent by the class under the instruction of a native French teacher, or at least of a teacher who has a fluent and correct use of the French language and a faultless accent. Such a special teacher should use no language but French in the classroom, and should work with the class in the presence of the regular teacher. In this way the work of the two would be interdependent, and the regular teacher, being frequently reminded by a living example that French is a spoken language, would be inspired to the acquisition of increased resources and greater power. In large cities where the number of teachers is great and the need of unification imperative, a competent director, preferably an American, should be employed.

The material for the special teacher's work should be drawn from wholesome and interesting stories, which should first be read under the guidance and criticism of the teacher, and afterward committed in part to memory, and used as the source of material for composition and conversation in French. The translation and grammar work, on the other hand, should be done under the direction of the regular teacher of English and French; and a cardinal principle of the instruction of the regular teacher should be that every French lesson should not only add to the pupil's acquisitions in the foreign language, but should contribute something also to his progress in the knowledge and use of his mother tongue.

Several independent experiments, involving the teaching of French, German, or Latin in public grammar schools, have already been in progress in different towns of Massachusetts for periods varying from one to five years. The conductors of these experiments, without exception, speak of the results accomplished in terms of satisfaction that border on enthusiasm. In the light of these and similar successful experiments, and in the light of the unanimous expression of expert professional opinion contained in the report of the recent Con-

ference on Modern Languages, it is perhaps hardly premature to say that the desirableness and feasibility of introducing a foreign language into the grammar school course of study are no longer open to question.

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Other articles discussing the shortening and enriching of the grammar school course have appeared in the EDUCATIONAL REVIEW as follows: The grammar school curriculum, by Superintendent William H. Maxwell, May, 1892; Reform in the grammar schools, by Professor Albert Bushnell Hart, October, 1892; The co-ordination of studies, by President Charles De Garmo, December, 1892; Departmental instruction in grammar schools, by Colonel Francis W. Parker, November, 1893.

III

THE STUDY OF EDUCATION AT THE SORBONNE

After the great shock and ruin of 1870–71, when France, stunned as it were and bewildered, began to gather up its forces and set about repairing damages and recovering its strength, it was evident to those who understood the true interests of the nation, that the foundation of material progress was to be found in widespread knowledge, and in raising the standard of the mental and moral culture of the people; so great efforts were made to increase the number and quality of schools and to improve public education in every possible way. When, after the opening and endowment of primary schools, all over France, the reform of secondary instruction was begun, a great want of better teachers was felt. The usual methods of teaching hitherto seemed to have consisted in heaping up undigested facts and cramming children's minds with dates, words, and formulas. The universal cry was: All this must be of the past; we want intelligent, rational teaching that will lead children to think, reflect, and reason upon their learning. The need for fit teachers was then felt.

The elementary teachers were trained in the departmental normal schools organized on purpose for them, and there they received some advice as to the way in which to approach the immature and uncultivated minds of their pupils; but on the subject of the aim and general principles of education the instruction given was very insufficient, if indeed it existed at all. A still more surprising fact is that at the École Normale Supérieure of Paris, the school designed to train professors for the lycées and Faculties, the teaching of pedagogy did not exist; and while this school produced most superior minds and many eminent men, it too often happened that, not having studied education at all, they found themselves in difficulties when they began to teach, although they knew the subject-

matter so well. Then for the first time they saw the error into which they had fallen when they supposed that great learning would suffice to make a teacher.

It was a broader view of the subject, correcting this erroneous and widespread idea, which made the reformers resolve to institute something to fill this void. At that time, Albert Dumont, then director of the higher education in France, was reorganizing his department, and seeking to put life into the Faculties by giving them regular auditors, pupils who should follow a whole course of lectures and have some sort of intimate relation with their teachers, and not simply be curious and casual lookers-in. This reorganization he worked at by divers means, chiefly by instituting *bourses* for students of the Faculties of Science and Letters aspiring to become teachers; and Dumont thought that for those young future teachers a course of lectures on the science of education would be most profitable, almost necessary.

It was for this purpose and under this title, the science of education, that the writer was called upon, in the beginning of the academic year 1883–84, to begin his lectures, then first provided for as a *cours complémentaire* at the Faculté des Lettres de Paris, in the Sorbonne.

The *cours*, then a public one, was opened in December, 1883. From the very first, the attendance was remarkably large; and as the course went on, the favor with which this teaching was received increased greatly. Once a week a lecture was given in which the professor, speaking *ex cathedra*, developed the theory of education. This theory he founded principally on his own experience, enlightened by the data of psychology and sociology, and the works of the most competent authors either French or foreign. A second exercise of quite a different character also took place each week. This was a conference, which also brought together numerous auditors of both sexes. The greater part of them were teachers who had some experience already, just enough to give them doubts as to their own procedure or excite their desire for added pedagogical knowledge. Others were students, aspiring

to be professors and wishing to learn how to set about their work. But what was most notable was the large number of teachers eager to be introduced to this science of education, lately included among their studies and examinations. Such was their eagerness for information on this point, that the hour chosen having been two o'clock in the afternoon, a petition, signed by eleven hundred names, requested an alteration in the hour, permitting them to be present after their daily classes. Of course, all these were not habitual auditors, but a large audience took the greatest interest in the subjects discussed. Many contributed their own opinions and observations; they wrote papers, and interpreted texts chosen by the professor. Foreigners also came in considerable numbers and showed much interest.

All these various elements gave life to the new creation, and the trial now seemed conclusive. As soon then as the resources of the budget permitted, M. Berthelot, the eminent chemist, then Minister of Public Instruction, proposed to the Chamber of Deputies the foundation of this chair. The proposition was accepted and the provision made in January, 1887.

The practical results of this measure appeared immediately and were important. The professor gained by this an increase of authority, though perhaps not for the general public; this class of auditors always follows its own taste and had already shown it most fully in this case. But his authority over the students was greatly increased, for their constant thoughts are turned toward their future career and their examinations. They are so taken up, so harassed, as it were, by the great number of different studies, that they can only find time for those more immediately and practically useful in the preparation for their degrees.

As regards pedagogy, it has no part yet in the programmes for any examination in France, except for the primary teachers; the professors of the lycées and colleges are not officially required to have a knowledge of it. And yet a half-utilitarian feeling re-enforced the slight interest at first shown for pedagogy. It was generally felt that the government, which attached

enough importance to the philosophy of education to provide a chair for it in the Faculty of Letters in Paris, would give preference to those who should profit by this opportunity, who showed interest and zeal in the study, and who should try to apply the rules it taught in their professional practice.

First the students of philosophy, then those of history, literature, grammar, the living languages, showed renewed interest in a subject which for many of them had hardly been more than an object of simple curiosity. This movement became still more marked, when such writers on education as Herbert Spencer, Kant, and Fichte were introduced into the programmes for *Aggrégation.*

When a *chargé de cours* becomes a professor, he owes the Faculty, besides his share of work as judge in the various examinations, three exercises a week: one, a public lecture, as before, and two conferences instead of one. On becoming professor, I of course conformed to this rule. One of the conferences remained open to all who wished to attend, without distinction of sex and without any conditions as to degrees. Primary teachers at work in Paris can be seen there, as before, together with candidates for professorships of all sorts, and with a variety of amateurs and foreigners. The Higher Normal School of St. Cloud, which prepares teachers for the ordinary normal schools, has always been and is still largely represented at this conference. There have been developed in it some very distinguished teachers, who are now in active service. The exercises in this conference are of a practical character, and consist chiefly in lessons prepared and discussed by the students themselves and criticised by the professor. There are also readings and comments on standard authors, principally moralists and theoretical writers on education, such as Pascal, La Bruyère, Rousseau, Fénelon, and Herbert Spencer. The gain looked for is a double one: the mind of the future teachers will be cultivated, elevated, and fortified by these studies and conversations, and they must be accustomed to teaching by that exercise which consists in delivering

a lecture on a given subject, or explaining and commenting on a passage indicated for pupils of a given age, to whom the lesson must be specially adapted. This conference takes place on Mondays at five o'clock in order that the teachers, occupied during the day in their schools, can be present after class hours.

The second conference is for the students more properly belonging to the Faculty (that is those who are regularly enrolled and possess at least a bachelor's diploma), and particularly for those aspiring to become teachers in public institutions.

During the first of the two years, the pupils are invited to take their share in these pedagogical conferences; for in the second year their minds are too much taken up by preparation for their degree examinations. And they are invited, whatever is the sort of teaching to which they look forward—philosophy, history, letters, mathematics, physics, or natural history. Seldom do the students of literature and the students of the sciences come together as in this course. It consists of about a dozen lectures, each of an hour's length, given once a week. First, the students are taught the general organization of public instruction in France; next, they are shown the proper aim and methods of secondary education. The duties of the different teachers in a lycée, as regards each other and as regards the pupils, are studied; this includes not only the existing rules and customs, but also the desiderata, the progress recently made or still to be desired in discipline and in methods. In short, the future professors are initiated with precision and in a practical spirit into general educational science, so as to facilitate their task at the beginning and preserve them from too great and repeated blunders at the outset of their career.

About the month of March these students are sent to various classes of the lycées in Paris, to see for themselves how the best and most experienced professors manage their teaching. For this purpose, the classes chosen are those known to be well conducted. Moreover, these visits are not forced on any

professor. Great care is taken to first insure a pleasant reception for the visitors. The professor also chooses his own mode of being useful to them, either by simply allowing them to listen and profit in that way, or better by permitting them soon to take an active part in the work, to oversee translations and construing, to correct exercises, or later, to lecture under his superintendence. This sort of probation lasts for about four or five weeks, in fact till the Easter holidays. After this, the young men sum up in a paper what they have seen and heard, and they add, if they like, any reflections or suggestions of their own. These papers form the subject of subsequent conversations in the conferences, conversations more specific and detailed than formerly, and bearing more closely on practice. But the year is not yet finished for the students. During the last three months' term they continue to study pedagogy, but no longer from the general point of view, nor by the special professor of education. They are now brought to study the educational relations of the particular subject they propose to teach. The future professors of literature, classical languages, history, living languages, and so on, receive counsel and direction from the corresponding professors of the Faculty. The professor of pedagogy, being also a specialist in philosophy, remains with the students in philosophy and expounds to them the rules applicable to teaching this subject in the lycées. For it must be remembered that in France the teaching of philosophy begins in the lycées, where it is particularly strong and well organized and gives most satisfactory results; it is the culmination of secondary studies.

Such is at the present time the state of the study of pedagogy at the Sorbonne, the center of the University of France. In three other Faculties of Letters, Lyons, Bordeaux, and Toulouse, there are *cours complémentaires* of pedagogy founded a little after that of Paris (in 1884); no one of these has yet been transformed into a professorial chair.

Of course this organization is far from being regarded as perfect. Improvements are desired and projected for extending and perfecting the special training of teachers, but it seems

best to stop with the description of existing facts, and not to begin to speculate on what may follow later on.

HENRI MARION

THE SORBONNE,
PARIS, FRANCE

Other articles in this series have already appeared, as follows: Is there a science of education, by Professor Josiah Royce, January and February, 1891; The new department of pedagogy at Harvard University, by Professor Paul H. Hanus, October, 1891; The study of education at Cornell University, by Professor S. G. Williams, April, 1892; at Stanford University, by Professor Earl Barnes, November, 1893; at the University of Michigan, by Professor B. A. Hinsdale, December, 1893: at the University of Edinburgh, by Professor S. S. Laurie, January, 1894.

IV

EDUCATIONAL EXHIBITS AT THE COLUMBIAN EXPOSITION (II)[1]

The final product of education, as has been suggested by the writer in a previous article in this REVIEW, exists only in the mind and cannot be shown in a material exhibit. This is especially true of the results attained by higher education. They may be partially represented by such concrete products as books and models, and by illustrations of equipment, methods, and results, but these things are merely symbols, and mean little to the ordinary World's Fair visitor.

The question may arise in the mind of the reader: "What has the ordinary visitor to do with an exhibit of higher education?" He should have a great deal to do with it, and he would if it were prepared in a way that enabled him to understand its contents clearly. It is not enough to label each of the pieces and place them side by side. There should be a dominant idea in the arrangement, a unity that could be perceived by any careful observer. There was scarcely an exhibit in the educational section of the Columbian Exposition that showed any such careful preparation, and therefore this article can be little more than a series of running comments on the exhibits from various higher institutions.

Among them all the exhibit from the German universities was by far the most valuable to the student of education. It showed in every part that it was intended to represent not any particular institution, but all of the twenty-one splendid centers of higher education in Germany. It was prepared by the German Government with a view to showing typical specimens of equipment and apparatus, the methods used, and the results achieved in German universities, and also to show historically the influence exerted by the universities on the progress of

[1] Begun in VI: 268.

civilization. Both objects were successfully accomplished, but it was only the expert educationist who could fully understand the exhibit. It was not prepared for the general public, and no provisions were made for helping the casual visitor to appreciate its value. The labels were brief and written in German, and the catalogues and descriptions which were distributed to persons who made special application were also in German. The university professors who were in charge were courteous and scholarly men, but in spite of their unwearied efforts they could accommodate only a small proportion of the people who wished to be helped to interpret the exhibit. It certainly needed interpretation, but once understood it became a wonderful source of information and inspiration to university men. The central feature was a "collective exhibit of the German universities," which contained seventy-nine volumes written expressly for the Exposition by the most eminent professors in Germany. Each of these men took for his subject his own department of study and attempted to show, by an historical treatment, the influence exerted by that department on the development of German civilization. Wundt in psychology, Klein in mathematics, Virchow in pathology, and others of equal reputation produced the monographs which form this splendid record of the achievements of German university men.

There was also a remarkable collection of pedagogical literature containing accounts of the origin and development of the German universities, their present constitution and government, biographies of their leading teachers, and a great deal of additional matter. It was from this collection of sources that the German professors drew a large part of their material for the monographs mentioned above. This library had three divisions: (1) general works, including bibliography, history, statistics, methods of university study in general and of the various departments of study in particular, and also student life and customs. (2) Biographies of the foremost university teachers, arranged in four groups, including the men whose work was done (*a*) in the fifteenth and sixteenth centuries, (*b*) in the seventeenth century, (*c*) in the eighteenth century, and

(*d*) in the nineteenth century. Among the men whose biographies were given there were not only university teachers but great scholars, statesmen, and ecclesiastics. (3) Literature of single universities, including their history and their laws and regulations; announcements of teachers and courses; programmes of special occasions; information in regard to scholarships and endowments; and books written by great professors and by students whose work they directed.

There were volumes of architectural drawings showing the plans and elevations of the buildings used by fifteen of the German universities, and photographic views of the interiors of these buildings. The beauty and value of this exhibit were greatly increased by the presence of about twenty-five oil paintings and statues of celebrated German scholars and patrons of learning.

In another section was a collection of scientific periodicals, including specimen volumes of the leading German publications and a bibliography of German periodical literature. There was also a fine collection of scientific books containing, it is true, only a small proportion of the whole number of scientific works written by German scholars, but nevertheless typical of the contributions they have made to nearly every department of human knowledge.

The technical library exhibit represented with great completeness the several systems in use for arranging and cataloguing books. It showed that while in methods and appliances the Germans are not as far advanced as the Americans; in the number and value of their libraries they are far ahead of them.

The exhibits already mentioned occupied less than half of the space devoted to the German universities. The remaining space contained special exhibits from twenty-nine different departments of study. Each of these was prepared by an eminent specialist, and showed specimens of the apparatus used in teaching, and typical examples of the problems attacked and the results attained in original research.

From this brief sketch of the German university exhibit it

may be seen that the power of the Govermnent to prescribe a plan for united action was the most important element which insured its success. There is no such power in the hands of the Goverment of the United States, and consequently the exhibit from our own universities, although much larger in quantity, was far less representative in character. Instead of being a collective exhibit designed to represent the universities as a whole, it was a series of individual exhibits, each arranged on a different plan. This was inevitable because of the diverse character of American institutions and the somewhat aggressive self-assertion which keeps them apart. Instead of furnishing material to the student of education by showing methods, equipment, courses of study, and the results of research work, it aimed primarily to attract and interest the public. It was this very fault, however, that gave it a certain advantage over the German university exhibit by making it easier to interpret its contents.

Before discussing in detail the American exhibits of higher education, it may be well to take a brief glance at the institutions that were, or might have been, represented. There are no two that afford an entirely satisfactory basis for comparison. Some do a considerable amount of true university work, but the greater number confine themselves mainly to offering undergraduate courses. Some have introduced the best scientific methods into every department of study, but many are still far behind the leaders in this respect. Some prescribe rigid entrance requirements and maintain a high standard of scholarship throughout, while others are little above the average city high school. There are, also, agricultural colleges and schools of technology, where the scientific and professional studies come first and culture courses are secondary. If these various types were distinct it might be possible to classify higher institutions, but they lap over one another in such a confusing way that any line dividing them into groups must be drawn arbitrarily. In discussing American exhibits, therefore, the contents of the exhibit rather than the nature of the institution will determine the grouping.

There were several exhibits in which the methods and results of advanced research work were clearly shown. One of the most important of these was the collective exhibit drawn from a number of universities and representing a typical laboratory for work in experimental psychology. Photographs of the laboratories and equipment of the several institutions contributing hung on the walls, and the remainder of the room contained apparatus of all kinds for observing mental phenomena and accurately recording the results. Near by was an anthropometric laboratory in which were shown the methods and results of work done in observing and recording physical characteristics. There were a large number of diagrams and charts, summarizing by graphic methods the results of a number of very interesting investigations. These two laboratories together revealed a most significant aspect of the work of American investigators—the tendency to make a thorough scientific study of the minds and bodies of pupils of all ages, in order to help each individual to learn in the way that nature intended he should.

The exhibits from Clark University and from the University of the City of New York contained material of a similar character. Clark showed a number of photographs of laboratories and apparatus for this work, and bound volumes of monographs and magazines in which the results of psychological research were given. The University of the City of New York showed charts illustrating experiments to determine mental characteristics such as eye-mindedness, ear-mindedness, and the like.

Among the other institutions showing methods and results of research work were Johns Hopkins, Harvard, the University of Chicago, the University of Pennsylvania, the University of Michigan, the Massachusetts Institute of Technology, and the Hahnemann Medical College of Philadelphia. Johns Hopkins sent a large photograph of the normal spectrum, illustrating the splendid astronomical work done by her professors and her advanced students. She also sent a typical collection of the publications written or edited by Johns Hopkins men, in order

to show the character, direction, and extent of their investigations and the channels they use in putting their results before the world. Harvard also displayed a considerable amount of astronomical work from both of her observatories—the one in Cambridge and the one she maintains in the mountains of Peru. Each of her scientific departments and professional schools was represented by a typical piece of apparatus, or a collection of specimens or books intended to show her admirable facilities for teaching and the original work done by her professors and students. The latter included two collections of books showing some of the contributions made by Harvard men to legal and historical literature.

There were a number of exhibits showing the methods used in the university for instruction and training. These represented more especially the scientific and professional departments, and attracted a great deal of attention.

One of the most valuable parts of the Harvard exhibit was that which showed the institution as a whole and furnished information in regard to its historical development and the present status of its faculties, buildings, and equipment. This exhibit included statistical charts, showing the relative growth of the several departments of study; charts illustrating the success achieved by the elective system which has been so thoroughly tried at Harvard; photographs and plans of buildings and grounds; and a fine collection of portraits and busts of men who have been closely identified with the university. There were also large editions of about thirty different pamphlets for free distribution. These included the regular programmes and announcements and also a number of monographs relating to the opportunities offered by Harvard, the necessary expenses of student life, and the financial assistance that may be obtained, if needed, from the university authorities.

The University of Pennsylvania sent a fine collection illustrating the results of the exploring expedition which she sent to Egypt and Assyria a few years ago; and also a collection of archæological material from the valley of the Delaware, where her professors have at various times conducted valuable inves-

tigations. She also showed a number of photographs and charts illustrating the growth of her different departments and their present condition.

The buildings of the University of Chicago were so close to the Exposition that they were visited by a great many people interested in education. There was therefore no attempt to send to the Fair a comprehensive showing of the work done by each department of study. The most important exhibit from that university was the Yerkes telescope. It represented not work already done, but facilities offered for future research work, and may be regarded as typical of the purpose for which primarily the university was established—original investigation by advanced students.

The University of Michigan sent two collections representing original work done in her chemical laboratories. One contained the results of a quantitative analysis of a number of foods, including wheat, bread, Indian corn, tea, and coffee. In each case the constituents were prepared from their proper sources, and the entire group—*i. e.*, a given weight of the food and the corresponding quantities of its several constituents—was placed in glass jars and clearly labeled. The other collection represented a similar investigation in the department of metallurgical chemistry. Iron ore, cast iron, blast furnace slag, steel, wrought iron, coal, limestone, and brass were all opened up in this way. These two exhibits were good illustrations of the way in which the results of scientific investigation may help in solving everyday problems of industrial and domestic life.

The Massachusetts Institute of Technology sent two important collections illustrating the original work done by her students and professors. The first was a complete set of the theses written by the class of 1892 when they were graduated. There were 128 men and 4 women in the class, and each of them presented before graduation the results of a distinctly original investigation conducted either alone or in conjunction with one other member of the class. In every instance the drawings, or other illustrations, made as a part of the thesis were shown in the exhibit.

The second collection was a complete set of the lecture notes prepared by Institute professors for the use of their own students. In some cases these notes have been expanded and published in book form through the customary channels. Usually, however, the notes are specially prepared for each class, and instead of being published are privately printed in small quantities. This is done in nearly every department of the Institute, and furnishes a striking illustration of the purely inductive method used by its professors and of their untiring efforts to give to their students the latest results of scientific thought and investigation.

The Hahnemann Medical College of Philadelphia made a very unique contribution to the educational section. It was the nervous system of a man, carefully dissected out by a skillful surgeon. This was mounted so as to show general outlines with the brain occupying the position of the head, the spinal cord the position of the backbone, and the nerve bundles and nerve fibers the positions of the body and limbs. It enabled the visitor to get a definite idea of the way in which the fibers of the nervous system, starting from the brain and the spinal cord, penetrate every part of the human body.

There were a number of exhibits designed to show something of the methods, equipment, and results of regular college work. The list included most of the above mentioned institutions, and also ten or twelve endowed colleges and almost an equal number of State universities. Some of these exhibits were so meager they deserved little attention, while others were of great interest and value. It was noticeable however, that even among the exhibits sent by the more prominent colleges there was great diversity. Some aimed to show their history, others their equipment, and still others the work done by former students and professors. Most of them seemed to regard a showing of present work—the courses of study, the methods used, and the results achieved—as a minor part of an educational exhibit.

Princeton emphasized her history. She sent portraits of all of her former presidents, pictures and a relief model of her

buildings and grounds, and a collection of interesting documents and relics connected with her development. There was also a large collection of books, which included, as far as possible, all of the important literary productions of the faculty and alumni. Student life was represented by photographs of famous athletic teams and other organizations, and by pictures of the various college societies and the houses they occupy. A few models and drawings and a case of museum material for teaching historic ornament were the only distinctly educational exhibits.

Yale showed a series of large photographs giving general views of buildings and grounds, interiors of laboratories, recitation halls, libraries, and museums; apparatus that is either very elaborate or especially characteristic of Yale work; and athletic teams that have won high laurels for their alma mater. The photographs were so fine that they really gave to the visitor a good idea of the material equipment of the university. But there was shown no work of students or professors, nothing to represent the splendid contributions made by Yale to literature and science. Columbia College was represented by a fine series of statistical tables and graphic charts showing the important features of her history and her present condition. One very interesting part of the exhibit consisted of two maps placed side by side, one representing the present site of the college and the other the new campus on Morningside Heights. The maps were drawn to the same scale and showed in a very effective way the great increase of area that will be afforded by the new site.

Brown, Amherst, Williams, Colgate, Hamilton, Rochester, Lehigh, Oberlin, Beloit, and Leland Stanford Jr. should be mentioned at least in the list of colleges represented. Most of them had attractive and tastefully arranged alcoves, but their exhibits showed no important features not already mentioned in connection with other institutions.

Among the women's colleges Vassar, Wellesley, Bryn Mawr, and many co-educational institutions were represented. Bryn Mawr had in the center of her exhibit a model of the campus,

showing the location of halls, dormitories, the gymnasium, and several tennis courts. On the walls were photographs giving characteristic views of interiors; a chart showing courses of study; and statistical tables giving the post-graduate history of all of her alumnæ. There were also several Ph. D. theses and partial files of student publications.

It may be of interest to mention here the exhibit made by the Association of Collegiate Alumnæ. This body of highly educated women is growing rapidly in numbers and exerts a very strong influence in many parts of the country. Its members aim to make the best possible use of their college training in helping to solve social and industrial problems. In the exhibit were a number of pamphlets containing addresses delivered before the several branches of the association. One, which may be taken as typical, was written by a professor of chemistry in one of the leading institutions of the East. Her subject was: "The relation of college women to progress in domestic economy." The writer indicated some of the ways in which a scientific training may be of use in the family and discussed the social and economic aspects of the servant question, the assistance that a knowledge of biology offers to the buyer of foods, and the relation of chemistry to cooking. She presented evidence of the growing tendency to make the higher education of women "tell" and to direct their effort into channels which will lead them to become better housekeepers and more effective workers in fields peculiarly their own.

The State university exhibits in every instance adjoined the public school exhibits. Only two States, Illinois and Michigan, made any serious effort to show the work of their respective universities. The other States represented were: Pennsylvania, Indiana, Wisconsin, Minnesota, Nebraska, Oregon, and California. Several of them showed only a few pictures of buildings and equipment and photographs of professors and students; others added outlines of courses, examples of student work, and perhaps copies of their student publications. One or two sent catalogues for distribution, but

as a rule they showed very little to indicate the true nature of their work.

The exhibit from the University of Michigan may be divided, for convenience in discussion, into: (*a*) general exhibits, (*b*) departmental exhibits, and (*c*) engineering exhibits. The general exhibits are described in the *University Record* for June as follows: "The exhibit includes topographical maps of the campus, made from actual surveys by civil engineering students, on which all buildings and natural objects are accurately located: a tolerably complete set of views of all of the buildings with floor plans of many of them, together with interior views of all laboratories, hospitals, many recitation rooms, and the library; a condensed account of the educational system of Michigan and a summary of the University Calendar, together with photographs of the president, the regents, and other officers, including members of the several faculties, all mounted and displayed on a revolving chart stand; a brief history of the university and of its several departments, together with a summary description of their present condition exhibited by a series of nineteen charts, 24x30 inches in size, framed and mounted so as to swing about a central upright; and a bookcase containing copies of nearly all the publications of professors written while connected with the university."

The list of departments sending exhibits included chemistry, medicine and surgery, dental surgery, the library, and the museum. A part of the chemistry exhibit has been described above. It was supplemented by other collections of work done by students both in the laboratory and the classroom and was intended to illustrate methods of teaching.

The exhibits of medicine and surgery contained an admirable presentation of the equipment, the methods, and the courses of instruction in those departments. They included a very complete series of photographs carefully interpreted by means of printed statements, and also a number of preparations such as all students in these departments are required to make.

The museum was represented by some rare zoölogical speci-

mens from the Philippine Islands and a collection of the birds and mammals of the State of Michigan.

The engineering exhibit was a very complete showing of the work done by students in the engineering laboratories and in the several courses in drawing and design. It included a number of hand tools and other small pieces made in the wood shop, the forge room, and the machine shop—and several larger tools, such as a forge, a drill press, and a machine lathe—all of them built by students. The exhibit of drawings contained examples of the freehand exercises and the work in geometrical construction and descriptive geometry; and also of the working and finished drawings made in the more advanced courses in machine design, stereotomy, and surveying.

The exhibit from the University of Illinois was not in the Liberal Arts Gallery but in the Illinois State Building. It occupied a large amount of space and could display, therefore, not only students' work and pictures of equipment, but students at work and specimen pieces of the equipment itself taken directly from the museums, shops, and laboratories of the university. This gave it a marked advantage over the other higher institutions.

In the general university exhibit was an alcove containing pictures of the faculty and of the buildings; catalogues for free distribution; and a number of diagrams and graphic charts showing the courses of study and the recent attendance in each department.

In the departmental exhibit the colleges of agriculture, engineering, science, and literature were all represented. The engineering, and science exhibits were, however, the most prominent. The general plan was to give one or more alcoves to each department and there show equipment and students' work. In some there were specimen pages of student exercises framed and hung on the wall, and the corresponding work of the entire class bound in a single volume and placed near by on bookshelves. In other departments (physics, for example) there were shown in glass cases series of typical

experiments with the apparatus properly arranged, and beside it a student's notebook open to the page on which the results of the experiment were recorded. In the alcoves for architecture there were groups of drawings, to show the amount of work done in each year of the course, and some typical examples of original work in house planning and design. One of the special features made possible by the large amount of space given to this exhibit was a machine shop, in which students from the university worked several hours each day. It was separated from the rest of the exhibit only by a low railing and contained a milling machine, a machine lathe, a speed lathe, and a dynamo—all of them driven by an electric motor. This shop furnished a valuable illustration of the thoroughly practical training that is given to professional students in the best engineering schools.

The most comprehensive and symmetrical exhibit of engineering education was that contributed by the Massachusetts Institute of Technology. It contained a number of large photographs showing exteriors and interiors of the buildings, and a complete set of architectural plans and illustrations of the efficient system by which the newer buildings are heated and ventilated. Organization was shown in a bound volume containing specimen pages of publications and announcements, and copies of all of the blank forms used by the officers of administration.

The work of the several departments was displayed in a very thorough fashion in separate alcoves. Each alcove contained on the walls specimen drawings and designs, and on a central table a large portfolio of matter specially prepared to show the plan of work. This portfolio gave, as far as possible, a complete picture of the course—the list of instructions, the subjects studied, arranged in order of sequence and showing how much time is devoted to each; the methods of instructors, described in printed statements prepared by the head of the department; the equipment shown by numerous photographs, each of which was described in detail; and specimen pages of the notes prepared by professors and those taken by students.

In the center of the exhibit were cases of shop exercises in carpentry, forging, pattern making, etc., each piece carefully labeled and the whole arranged in a progressive series. A special catalogue accompanied this part of the exhibit, and a circular was given out, describing its main characteristics and its relation to the work of the other departments of the institute.

There were several large exhibits of shop and laboratory products—an electric motor, a force pump, and a case of chemicals prepared by students for their own use. Student life was shown in a portfolio which contained photographs of athletic teams and of musical, literary, and social organizations; specimen pages of student publications; and a printed account of all of the prominent social features of Institute life. The collection as a whole represented the Institute so well that it is said that if the entire institution were to be swept away, it could be reconstructed from the information contained in the exhibit.

One of the most interesting exhibits of higher education was on the battleship *Illinois*, and represented the work done at the Annapolis Naval Academy. It consisted chiefly of text-books, examination papers, and records from each department of study and cases of shop work done by the cadets. Besides the usual exercises from the drawing room, forge room, wood shop, and machine shop there were others peculiar to Annapolis, such as specimens of work done in splicing cables, braiding ropes, and placing pulley blocks; designs for marine engines and boilers; and illustrations of problems in seamanship and gunnery. There were a number of charts showing results of the physical tests conducted at frequent intervals and also a number of student possessions—foils, boxing gloves, and foot-balls—that were very suggestive of the cadets' fondness for athletic sports.

The exhibit from Purdue University was in some respects one of the best in the American section. It represented very effectively the objective work done—the shop work, drawing, and laboratory tests. "The Making of a Lathe" was shown in a way that gave the visitor a clear notion of the entire process

of designing and constructing machines. First came a set of blue prints and working drawings showing the form and dimensions of each piece of the lathe, and a set of finished drawings showing the grouping of the parts. Then came a complete set of the patterns from which the lathe was cast; then the rough castings made from these patterns; then the finished castings; and finally the completed lathe. The same idea of logical development was used in other parts of the shop exhibit. The process of casting was illustrated by a series of ten or twelve molders' flasks, the first empty, the second half filled with sand, and the others showing the successive steps taken in making the mold, drawing the pattern, cutting the gate, pouring the metal, and taking out the casting. The exhibit of forging was equally clear. A pair of tongs, for example, was shown first in the form of stock, then prepared for welding, and then ready for use.

The most unique feature of this exhibit, however, was a small working model of the locomotive which is a part of the Purdue laboratory equipment and is used in making shop tests that are said to be as accurate as road tests. The load is obtained by applying hydraulic pressure to the wheels and the influence of grade by adjusting the driving wheels at their points of contact with the free wheels on which they rest.

The exhibit of the Rensselaer Polytechnic Institute was entirely different from that of any other engineering school. It contained, it is true, a small amount of students' work, *i. e.*, several portfolios of geometrical and machine drawings and exercises in graphics and surveying, but the main part of the exhibit was designed to show, not undergraduate study but the work done in after life by graduates. There were pictures of bridges, railroads, aqueducts, and many other engineering works constructed wholly or in part by graduates; and several machines showing inventions made by them. Although very interesting, these things cannot be regarded as legitimate parts of an educational exhibit, because the mature work of an engineer is influenced by many factors besides the training received during the early years spent in professional study.

The collective exhibit of agricultural colleges and experiment stations was one of the most important and suggestive parts of the entire Exposition. It represented about sixty institutions which offer to both men and women "instruction in agriculture, the mechanic arts, and various branches of physical, natural, and economic science with special reference to their application in the industries of life and to the facilities for such instruction." It contained illustrations of equipment and methods of instruction and specimens of students' work, which showed that both the colleges and the stations are exerting a most important influence; the colleges by giving students a sound training in the methods of science and their practical application, the experiment stations by making an united effort "to create positive knowledge toward the development of an agricultural science." The illustrations of equipment included a considerable amount of material used in teaching how farms should be laid out and drained, buildings arranged, soils improved, crops planted, tended, and harvested, and stock cared for at all seasons. Under "methods of instruction" it was shown that the laboratory method is used wherever practicable, and that the list of laboratories includes not only the usual rooms for experimental science and shop work, but also fields, stables, orchards, and gardens. The student work was, as might be expected, of a very practical character—shop work of all sorts, scientific preparations, samples of crops, and products of the dairy as well as needlework, cookery, and preserved foods.

There was evidence of a most earnest effort on the part of these institutions to work together—each making its course as broad as possible by forming an alliance with a college which offers instruction in the liberal arts, each paying special attention to local conditions in order to make its influence felt in its immediate neighborhood; and each recognizing in its research work the principle of division of labor and attacking certain definite parts of the whole great problem.

The movement for university extension was represented by exhibits from Oxford, the University of Chicago, the Uni-

versity of the State of New York, and several smaller colleges. Oxford sent a case containing photographs of the exterior and interior of the building she has devoted to this work, examples of the publications issued and the blank forms used, a specimen traveling library containing thirty-one volumes, and a considerable amount of statistical and other information in regard to the history of the movement in England.

The University of the State of New York and the University of Chicago showed on wing frames sets of administrative blanks and specimens of the announcements and other publications issued in connection with extension work in both places. There were also several traveling libraries, illustrating the methods used in furnishing to each lecturer a moderate number of the best reference books bearing on his subject and sending them with him wherever he goes, so as to furnish his students with a small working library.

The Chautauqua exhibit may be mentioned in this connection—not because the Chautauqua system resembles university extension in its specific aims and methods, for it does not—but because it, too, is a movement for popularizing higher education and fostering a taste for the various lines of study. The alcove devoted to this exhibit contained a very systematic showing of the work done in the Chautauqua literary and scientific circles and also in Chautauqua College. Programmes and leaflets explaining the work were freely distributed, and a great many visitors were led to recognize for the first time that "Chautauqua" stands for two very distinct things: (1) literary and scientific work done at home during the year by people who wish to be guided in their reading and study; and (2) thorough college work in all branches done, at Chautauqua, under competent university instructors, during six weeks of the summer vacation.

For obvious reasons the greater part of this article has been devoted to a comparison of American educational exhibits. This was not because the foreign universities sent nothing, for Germany, France, Russia, Canada, Japan, and the South American Republics were all represented, but rather because

of the greater importance to us of a study of education at home. We could derive great profit from a knowledge of foreign schools and foreign institutions, but, after all, it is the American problem that confronts us and the American solution that should receive our closest study.

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Other articles on education at the Chicago Exposition have appeared in the EDUCATIONAL REVIEW as follows: January, 1893, p. 92, 103; Educational exhibits at World's Fairs, by Richard Waterman, Jr., February and March, 1893; Educational exhibits at the Columbian Exposition, by Richard Waterman, Jr., June, 1893; International educational congresses of 1893, by Richard Waterman, Jr., September, 1893; A foreigner's impressions of the Chicago educational congresses, by Gabriel Compayré, and Educational exhibits at the Columbian Exposition (I), by Richard Waterman, Jr., October, 1893.

V

CONVEYANCE OF CHILDREN TO SCHOOL IN MASSACHUSETTS

In the statistical tables contained in the Fifty-third Report of the Massachusetts Board of Education (1888–89) there appeared for the first time, among the items of expenditure for public schools, "For transportation of pupils." To answer the many questions suggested by this title this paper is prepared at the request of the editor of the EDUCATIONAL REVIEW.

Among the school laws of the State is the following, enacted in 1869: "Any town in this Commonwealth may raise by taxation or otherwise, and appropriate, money to be expended by the school committee, in their discretion, for the conveyance of pupils to and from the public schools."

This exactment was a necessary supplement to one made a week earlier by which the school district system was abolished. Among the changes which followed the introduction of the modern factory system, the movement of population toward the manufacturing and railroad centers was the most conspicuous; and it had a profound and lasting effect upon the educational system of the State. Hundreds of neighborhoods, where there had been for generations flourishing district schools, were left without children enough to make a decent school.

All intelligent people knew that these small schools were the most expensive luxuries that the towns could indulge in, and persistent efforts were made by the Board of Education, and by the progressive school people in the towns, to abandon the district system and to unite and grade the schools. One of the strongest arguments against this course was the fact that children would be under the necessity of going long dis-

tances to school, and this in many cases over roads always unfrequented, and in winter frequently impassable.

While the abolition of the district system would not necessarily close any of these small schools, it would make it easier to do so, provided the difficulty about distance could be overcome. To effect this end, and so secure the fullest benefit of the town system, the conveyance of children at public expense was authorized. Towns immediately began to avail themselves of the opportunity, and from 1870 to the present time the number of towns appropriating money for this purpose has steadily increased.

The only statistics available are for the last four school years.

	1888–89.	1889–90.	1890–91.	1891–92.
Amount expended	$22,118.38	$24,145.12	$30,648.58	$38,726.07
Number of cities and towns expending	104	117	145	160
Whole number of towns and cities in State, 351.				

During the current year the amount is likely to be largely increased. The sums spent by the different towns varied from five dollars to sixteen hundred dollars. These expenditures can be best considered under four heads: 1. Isolated families. 2. Union schools. 3. Central schools. 4. High schools.

ISOLATED FAMILIES

The general school law requires towns to maintain a sufficient number of schools for all the children who may legally attend school therein, and the schoolhouses must be "conveniently located for the accommodation of all the children." The phrase conveniently located is an elastic one and is interpreted differently in different localities. Custom has much to do with it. In some parts of the State two miles would not be considered an unreasonable distance for children to walk to school. In other localities to walk a mile would be deemed a hardship. But there are cases where families have settled on the extreme edge of towns and are from three to five miles from school. A case has just come under my notice, where

families having seven young children have recently planted themselves five miles from the nearest school. Prior to 1869 a school must have been opened for these children, but rather than do this now, the town pays the father of some of the children two dollars a week to convey them all to the nearest school. In another town two dollars a week is paid for the conveyance of two young children one and a half miles, and to the same school three children of another family are conveyed the same distance at the same cost.

UNION SCHOOLS

Since the abolition of the district system the number of rural schools has been slowly but steadily decreasing. In some towns there is a standing vote that no school shall be kept open for less than ten pupils. When the number falls below this the school is closed and the pupils are distributed among the nearest schools. Sometimes all the children can reach other schools without serious inconvenience, but there may be young children living too far away to walk. Arrangements are frequently made with the parents of such children to convey them to school, and the town pays them for their time. In this way three schools may be brought into two or even into one, and the cost of conveying the children may be less than the cost of keeping all the schools open. In some cases the children walk to the closed schoolhouses and are conveyed from there instead of from their homes.

Probably the expenditure for transportation in a majority of towns is in consequence of the union of these small schools. The following are illustrative cases: The town of G. spends $350 for twenty scholars, conveyed mostly by teams, some three miles. The town of S. conveys about thirty-five scholars by teams an average distance of one and a half miles at an average cost of $9.37 per scholar for the school year.

CENTRAL SCHOOLS

The process of uniting schools has progressed so far, in some communities, that all the children in town are brought together into a graded school in a building near the center of popula-

tion. This passage from the extreme of segregation which characterized the old district system to the extreme of aggregation is comparatively recent and is confined to a few towns, but many others are on the way to it. The following extracts from statements by the school authorities of one or two towns explain this class of cases.

"We transport pupils to all grades indiscriminately—all that are about a mile and a half from the central schoolhouse. We had quite a territory, fifteen or sixteen years ago, containing six districts, each with a poor schoolhouse and with an average of perhaps ten or a dozen pupils in each. We gradually abandoned these houses and carried the children to the center, where we had a fine school building. We convey about seventy-five pupils at a cost of eleven hundred dollars annually. We hire teams, not pretentious turnouts, but comfortable. The children are not taken immediately from their homes except on main roads; we do not follow out crossroads. Some walk half a mile to take teams. At first there was objection, but now it is universally acceptable. We have no instructions how far or whom we shall carry. We say that children can walk a mile well enough, and do not mean to furnish transportation for that distance. Of course there is some disposition to abuse this privilege like all others."

The annual report of the school committee of Concord for 1891–92 contains an account of the consolidation of schools in that town prepared by the superintendent, Mr. W. E. Eaton. From this are taken the following facts and extracts: "Prior to the year 1879 the common schools of Concord were twelve in number, occupying eleven houses. Five of these schools were in the central village; two under one roof at West Concord; and the remaining five were country district schools for the accommodation of the outlying farming population. The district schoolhouses were at distances from the center varying from one and a half to three miles." A large building was erected in 1880, into which were brought the five village schools. Beginning with 1879 one after another of the outlying schools was closed, in most cases at the request of the parents, it not

being the policy of the committee to force consolidation. In 1887 the last of these five districts petitioned to have their children conveyed to the center, and in 1891 the town voted to sell the unoccupied houses, thus burning its bridges behind it.

"This action of the town, taken without a voice raised in opposition, indicates the general satisfaction with the present system. The apprehension of the owners of real estate, that a depreciation of values would result if the local schools were closed, has proven to be groundless. The natural reluctance of parents to send their young children so far from home, and for all day, to attend the center school, has vanished. The children are conveyed in comfortable vehicles fitted up for their accommodation. They are in charge of trusty drivers *en route*, and at noon they are under the especial care of one of the teachers, who has an extra compensation for the service. When it is practicable, a farmer living near the extreme end of the district is employed to convey the children. Often the farmer's wife drives the conveyance—an arrangement that meets the entire approval of the school committee, and is, perhaps, the most satisfactory one possible. As a rule, the committee do not approve of intrusting the duty to the hired man. Two two-horse barges and two one-horse wagons are in use at present. All these vehicles are fitted with seats running lengthwise, and are closed or open at sides and ends as the weather requires, and in cold weather are provided with blankets and straw. The driver starts from or near the remote end of his district, and drives down the principal thoroughfare, taking up the children at their own doors or at cross-street corners.

The attendance of the children conveyed is several per cent. better than that of the village children, and it is far higher than it was in the old district schools. This is not strange when one reflects that the children are taken at or near their own doors and conveyed to school without exposure in stormy weather, and with entire comfort in cold or snowy weather. Discipline in the carriages is maintained readily, as the driver has authority to put out any unruly child. The children are conveyed from 1½ to 3½ miles. The cost of transportation is about forty dollars per week. It is estimated that it would cost sixty dollars a week to maintain schools in all the districts. The number of teachers in the center schools is not increased by the consolidation, as the sixty to seventy-five children from the districts are distributed quite uniformly among the various rooms."

The town of Lexington—following the example set by its neighbor—brings about 130 children from the anciently and therefore badly constructed rural schoolhouses to a new fifty-thousand-dollar building in the center of the town. The conveyance is by four exceptionally commodious and comfortable barges. The barges are run by a time schedule, the driver being under contract to be at each of the six or seven designated stopping places at a specified time in the morning.

The cost of conveyance averages a little more than ten cents a day for each pupil. The appropriation this year is twenty-five hundred dollars. The new system costs more than the old one, as the cost of maintaining the new building is greater than that of the old houses, and the entire equipment is much superior. But the advantages of consolidation are deemed to more than offset the increased expense.

A neighboring town brings all its pupils to a central school, conveying about fifty children in barges at a cost of $6.50 a day. The barges start from the most remote house on the main road, and pick up the children along the way. The average distance conveyed is two miles. In other towns the arrangements are similar.

HIGH SCHOOLS

Since 1647 the larger towns have been required by law to maintain one school of a high grade "for the benefit of all the inhabitants." During the last century and the early part of the present one the support of this school was often a hardship, because the population was so scattered. Many towns contained no village center; others had several such centers, all jealous of each other, and the location of the high school was a vexed question. Often the school was held for a few months in different parts of the town in succession. With the coming of the railroads and factories new centers of population were created, often on the extreme edge of the town. In all these cases, wherever the high school might be located, it was likely, on account of distance, to fail to be "for the benefit of all the inhabitants." The law of 1869, though made for another purpose, was soon seen to afford a happy solution of the high school problem, and now large sums of money are annually spent to equalize the opportunities for high school advantages. The following are a few typical cases:

P. has four villages with the high school in the largest, in the extreme southern end of the town. From two of the three outside villages, two miles away, pupils come by rail at an average expense of twelve cents a day. From another village,

four miles distant, an omnibus brings twelve to fifteen pupils at a cost of $2.30 a day.

W. has four or five villages with high schools in two of them, to which pupils are brought at an expense of $1037.

E. has two villages. Pupils are brought from one of these by rail. From November 1 to May 1, barges take them from their homes to the railroad station. About forty pupils are conveyed at an expense of one thousand dollars.

In F. parents convey their children to the high school in carriages or by rail, and the town refunds the expense. All pupils living more than a mile away share in this distribution in proportion to the distance. Some travel eight miles. From twenty-eight to thirty-five pupils are conveyed at an average expense of from twenty to twenty-five dollars each per year. The city of G. has several outlying villages, and from these pupils come to the high school at public expense in barges, electric cars, and steam cars.

These individual cases are perhaps sufficient to show the use which the people are making of the permission given to them to tax themselves for this peculiar school purpose. There is no uniformity of practice. Each town works out its own problem in its own way, as the liberality of its school spirit prompts. The practice has already wrought much good to the schools, and it promises to be still more fruitful in the future. It is doubtful if any other forty thousand dollars of the nine millions spent for public school purposes brings so large a return

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Other articles by Mr. Martin have appeared in the EDUCATIONAL REVIEW as follows: Public school pioneering, June, 1892, March, 1893; Horace Mann and the revival of education in Massachusetts, May, 1893.

VI

INDIVIDUAL TEACHING: THE PUEBLO PLAN

The writer of this article experiences considerable embarrassment in its preparation, because of its somewhat personal bearing; but he presents no apology, except the request of the editor for a detailed description of the principles, methods, and results of the work in the Pueblo industrial public schools of Pueblo, Colorado.

These schools are so named, not from any predominance of the industrial features of work but because of a title assumed several years ago to distinguish them from another independent district of the city. There is a well organized department of industrial work, but this is not distinctive; the other departments are of correlative value and are probably as high in character as in the best of good schools. The aim is to prepare thoroughly for the best classical, scientific, and polytechnic colleges of the land, as well as to fit for the general demands of life. The schools enrolled two thousand pupils and are taught ordinarily by fifty teachers.

The fundamental characteristic of the plan on which the schools are organized is its conservation of the individual. The pupil is placed purely with reference to where he can get the most good for himself. He works as an individual, progresses as an individual, is promoted as an individual, and is graduated as an individual. The ordinary nomenclature of schools is continued for convenience; but the whole system is one of flexibility, permitting pupils to pass from working-section to working-section as may be expedient. The perplexities relative to class intervals have disappeared, because there is no mechanical classification. In appellation the term junior or senior may be used; but such term does not locate the individual, any more than the name of a division of a railroad locates the exact position of a particular train. For working

purposes the pupils are grouped in working-sections; but the members of a working-section are not necessarily doing the same work, or rather they are not doing the same work simultaneously. In brief, the school is both graded and ungraded: graded in so far as applies to its plan of work, but ungraded in its accommodation of the individual. In the following presentation of underlying principles, the one just described is fundamental and should be held distinctly in mind.

Of primary consideration is the health of the pupil. Expensive indeed is any education obtained at the sacrifice of good health. The fact is, there is nothing in the demands of symmetrical education calling for such sacrifice; the work of the true school is conducive to vigor of body and mind. A complete system of physical culture conducted by a special instructor, the condition of the working rooms, carefully directed methods of study, the removal of false incentives, and the regulation of hours of study have done much to give a magnificent health to our pupils such as is not often seen among school children.

There is no technical study or preparation of lessons outside of the legitimate hours of session. This arose originally from a radical experiment made to find out just what could be done without evening and other outside study, in order that intelligent limitation might be placed upon whatever work might be required upon discontinuance of such experiment. Throughout the entire system of schools there was prohibition of all outside study. The results were surprising. There was no loss in the progress of the pupils, excepting when an occasional teacher was found who lacked the power of adjusting herself to the new conditions. The experiment was continued as a cardinal factor of all school work with more and more satisfactory results. For a year or more there has been no technical study at home, all work has been within the regular hours of session, and a month's advancement now is more than a month's advancement before the experiment was made. In a circular issued in February, 1893, the statement was made that this action was taken because of the following considera-

tions: "1. The Colorado student is more active than his fellow of less favored locality and can do more work in a given time. 2. The boy or girl who gives from 5½ to 6½ hours daily to strong, vigorous study does enough; systematic study for that number of hours, continued through the twelve years of school life, will meet the requirements of active citizenship and of college preparation. 3. From a hygienic point of view the usual supplemental home or evening study is not right. Students need rest in addition to that which comes during the hours of sleep. The too frequent study just before and just after the hurried meal, and the late hours, generally by inadequate light, are productive of costly results. Besides there are but few homes where the circumstances are favorable to concentrated study. 4. The extra hours of preparation in technical lines crowd to the wall all general reading, spontaneous scientific investigation, inventive exercise, or recreative pastime. 5. It is believed the fresh, vigorous work of active and unclouded intellect during the regular school hours is worth more than the apparent results obtained through long-protracted hours of wearisome study." It is true, of course, that the happy results that have followed have not been due to the mere confinement of work to regular school hours. There has been readjustment of methods in every department of work. The lesson-hearer has given place to the teacher. Subjects of study have not been lessened but have rather been increased. Recognition is made of the fact that time belongs to the pupil and not to the teacher. The principles of economy have been so applied to time, by the abolition of dead exercises and better plans in general, that the regular school hours are now long enough for every desired school exercise.

The day in the high school is divided into six working periods, each one hour long, with the addition of one daily period of half an hour for music. One regular period is spent in the gymnasium, another on alternate days in the industrial department; thus leaving an average of 4½ hours daily in which all of the work in language, science, mathematics, his-

tory, literature, and drawing is covered. Three periods a day are definitely assigned to the three literary studies carried on together; the additional 1½ hour is regarded as extra time to be spent wherever the pupil needs it most, or in some cases according to his individual bent. In the lower classes the assignment of this extra time is left to the teacher; in the two higher classes it is left to the student. In the high school the work is conducted by departments and hence a fixed programme is followed. In grades below the high school the work is entirely by flexible programmes, excepting as certain studies are arranged so as to systematize the time of certain teachers. The studies do not always come in the same order, and hence all studies can share in the advantages of the stronger hours of the day. However, each teacher usually arranges her plan of work one week in advance. The time is not apportioned by rule, but is left entirely to the judgment of the teacher. The working periods are longer than is usual elsewhere. The teacher is instructed to continue a given exercise, preferably until something definite is gained; observing only this rule of limitation, never to pass the point of vigorous and interested attention on the part of the pupils. There is no attempt to complete the full round of studies in any one day; but in the average of time it is expected that the plans of the school will be covered, excepting as influenced by the particular needs of rooms and of individuals. Great reliance is placed upon the judgment and individuality of the teacher; and it may as well be said that teachers have responded nobly to such a trust. In the primary grades the methods are largely those of the kindergarten. Indeed it may be added the entire plan of the school finds its keynote in the application of the principles of the kindergarten to every department of school work.

There is no recitation as generally conducted in schools. The class recitation was abolished, because it reflected on the honesty of the student's preparation; because it was full of dead time, excepting to the one or two who were active in recitation; because of its enormous demands upon time. The

work is now conducted largely by what may be called laboratory methods. The entire time of the pupil is spent in active advance work. Every room is a true studio or workshop, in which the pupils work as individuals. The province of the teacher is not to line up the pupils and to consume time by entertainment, lecturing, and development of subjects; but to pass from desk to desk as the inspiring director and pupil's assistant, with but one intent and that the development of the self-reliant and independent worker. There is no attempt to keep pupils together in work; but at the same time, a pupil must thoroughly qualify before passing from one lesson or subject to another. The bright are not held back, neither are those who need more time hurried over work they do not fully understand. Sometimes several pupils may be seen working together in a section because of present convenience, but the section is a temporary thing and may not designate the working place of the pupil to-morrow. The very fact that two pupils are side by side in work and in advancement to-day indicates nothing for the future. However, it should not be understood that there is no recitation, examination, or class exercise. Each individual actually and absolutely recites every chapter and line of his Latin, every section of his other studies, and passes his examination in the most thorough manner. How much superior this is to the ordinary plan, whereby the student qualifies in only selected parts and runs his risk and takes chances in a hit or miss assignment! But in this actual qualification of the individual upon every particular of his work there is no passiveness or lost time for the others; for all, excepting the one, are uninterrupted in continuous advance work. There is also the class exercise; but it is only for presentation of fundamental principles in beginning a new subject, the giving of working directions, or the discussion of general principles applying to all individuals. There is no assignment to-day of what shall be done to-morrow; if the teacher has any general working directions, they are given at the beginning of the working period. In the lower rooms the individualization is not conducted in just the same manner.

The attention of a school is concentrated upon the same subject, for instance interest; but all pupils are not necessarily expected to work the same number of examples, the brighter ones being cared for by abundant supplemental and enlarged assignments. The methods for the conduct of the work are as various as there are different teachers. Indeed the schools can scarcely be said to have a method.

The work of the schools is conducted with reference to subjects. This is made possible by the fact that the district owns all text-books and material and makes everything free. Thus it happens that books are used for their real value, but do not stand in the way of the progress of the schools or of the individual. The course of study is so arranged that the subjects of every succeeding room are anticipated in the work of the preceding; so that change from working-section to working-section, or from room to room, presents no great transition difficulties. Promotions are based entirely upon one thing and that the ability to do, without reference to details, of work covered. The mechanical excellence of the school, or consideration of what has been done in some parallel cases, is never allowed to stand in the way of the advancement of the individual if he has earned it.

In these schools pupils are taught to work for the love of work, no other motive being presented. There are no marks, no mechanical rewards for doing right, no rankings or discriminating honors of any kind, and none are needed. Bright, attractive, and carefully prepared work and a warm-hearted, enthusiastic, co-operative teacher will always make the willing and energetic pupil. Pure love for the work itself, and the opportunity for continuous promotion, develop the highest endeavor that any teacher could ask of a school. However, the individual work is systematized, and a carefully kept record shows the advancement of the various pupils. For instance, when a pupil has satisfactorily covered a given subject of study, be it a chapter in Cæsar or an assignment in arithmetic, the teacher's entry is placed in the record. This record, however, merely indicates one thing and that is that the work has been

satisfactory. Until the teacher is prepared to give this credit, the pupil continues upon the work in hand. There is no passing from lesson to lesson until each is thoroughly understood. What each one gets, he gets well; and this is true of the weaker ones in the school as well as the brighter. This record is not necessarily a daily one. Sometimes it is made on completion of a subject or special assignment; it is always and only made at the time of complete qualification. In the lower rooms it is not kept at all, excepting in recognition of supplemental and collateral work. The plan is intended to care better for the so-called "backward" pupils. The system of grading that compels the pupil who is behind his class to drop out of school, is not right. Somewhere along the line there must be a place for every pupil, be his advancement or progress what it may. Hence, the desirability of an educational system that adapts itself to the circumstances and environments of individual life. Teachers are instructed to provide carefully for the discouraged pupil and to give more time to the lower half of the school, remembering that the bright ones may always be cared for by supplemental or advanced assignments of work.

No doubt a glimpse into the working conditions of the several rooms would be of interest. I will therefore attempt a brief description of the work in progress just as it might be seen by a casual visitor.

The Latin and Greek room is purely a studio, with one artist-teacher, the inspiration and assistant of just one hundred individual workers, in charge. Each student is required to give one hour per day to each branch studied and has the option of an additional hour, excepting in the first year, where such extra hour in Latin is only allowed twice each week. Approximately, then, the time apportioned per week by each pupil to Latin is as follows: Elementary Latin, seven hours; Cæsar, ten hours; Cicero, eight hours; Vergil, eight hours. In Greek, the report shows for beginners' work an average of eight hours; for the Anabasis and Iliad, ten hours. The time given in both Latin and Greek provides also for all the col-

lateral work in grammatical drill, composition, prosody, and historical references. During the latter half of the year the optional time in Latin and Greek is lessened from one to three hours per week in each branch. The periods of work of pupils in the room are determined entirely with reference to their convenience as individuals. There is no special attempt to gather together the Cæsar pupils at one time and the Cicero or Vergil pupils at another. The period is for the study of Latin or Greek. The largest number seen in the room during any one period is about fifty, but in general the average is much less. At the same time may frequently be seen pupils working in elementary Latin, elementary Greek, Cæsar, Cicero, Vergil, Anabasis, and Iliad, and in these books at as many different places as there are different workers. The same elementary Latin section has pupils working side by side, some in Harper's *Inductive Method*, some in Collar's *Beginner's Latin*. The teacher, the only helper the pupil has, passes from desk to desk, assisting, quizzing, testing, and qualifying. Sometimes as the work naturally groups pupils, several at one time may engage the teacher's attention; but, as a rule, the entire work is by and for the individual.

The modern languages present no difficulties, as the basis of the work in them is entirely conversational. Besides the conversational work and the grammar, the pupils read Sterns' *Studien und Plaudereien*, *Undine*, *Minna Von Barnhelm*, *Hermann und Dorothea*, and *Wilhelm Tell*. One hour per day is sufficient for this work, and all of it is covered inside of two years.

In mathematics the high school studies succeed each other as follows: plane geometry, algebra, solid geometry, trigonometry, and surveying. The first two receive seven or eight hours per week each and the others five hours. In this department the number of workers is much larger, but the work is just as individual. At first there was the appearance of some difficulty, but this has entirely disappeared. The teacher is able to handle a large number of individual workers just as easily as she formerly handled a single class, and without the

loss incident to class work. The plan does not preclude abundant explanation, analysis, and blackboard work. The examinations are systematic, but not simultaneous.

In the lower rooms the work in mathematics is just as successful and characteristic; excepting, as already said, that the energies of the individuals are confined within a given subject, the individualization being preserved by means of enlarged and supplementary opportunities. The mathematical work of the younger pupils has been greatly enriched by utilizing elementary geometry and some fundamental principles of algebra.

The science work in the high school is preceded by manual training, mechanical drawing, and geometry. These workshops are true laboratories wherein the pupils work purely as individuals. The course in each study is by subjects. Absolute independence is secured by the fact that two students seldom work on the same subject simultaneously. The pupil progresses according to his ability. The subject that requires two weeks of one pupil may be done by another in three or four days; but he must complete his present work thoroughly before advancing to another assignment. Personal investigation characterizes the work. As in other departments, there is no attempt to have pupils carry an accumulation of facts from the laboratory, but they are trained to become students of investigation, thought, originality, and power. Definite personal investigation of one subject is considered of more value than the mere book-acquaintance of a hundred or more. One hour each day is given to science.

The work in history, biography, and literature is not as full as is desired, because the school at present is but meagerly supplied with proper accessories. The ideal plan calls for a library as the proper working room with the librarian as the teacher, directing the reading of those who, above every other consideration, should be taught to love these beautiful studies. The pre-eminent object should be to make readers. Even with our limited supply of material, some very excellent results are obtained. During the working period the entire technical study is done, but there is planned a collateral course in gen-

eral reading that is intended to be directive in character. The pupils are frequently grouped for purposes of discussion, co-operative readings, and interchange of opinions.

The commercial studies present no difficulties to the execution of the plan. The typewriting pupils certainly work purely as individuals. In book-keeping each one completes the several typical sets of books and then proceeds to what are called individual sets, of which he makes as many as he can with advantage to himself. A systematic plan for business practice is intended later on to organize all students of this study into a working business community.

In technical grammar there is a great deal of oral work. The fact is that some of the best teachers of grammar are those who discard all text-books and accomplish their results by other methods. Every pupil in the room is alive to the work in hand every moment of the time. Rhetoric is even more easily directed, on our principles, than grammar.

The geography room is always a delight. The things to be considered in geography are relief, physical conditions, life, home, society. The molding board has its place in the presentation of basic forms; and upon such foundation should grow a continent or a section that takes into its development everything of the sciences, economics, history, literature, art, and industries thereto pertaining.

In physical culture the greatest care is exercised to provide perfectly for the symmetrical development of the individual.

Each pupil is carefully examined and appropriate exercises are prescribed. There are certainly class and concert drills, but not for all pupils; and in no case is the individual lost sight of. The magnificent health of those who for several years have had the advantage of careful training in the gymnasium is a standing demonstration of the excellence of methods pursued. The school holds to physical culture not only because of the grace, strength, and beauty it gives physically, but also because of its direct and incidental intellectual and ethical value. It is very easy to demonstrate the folly of non-individual treatment in the gymnasium; but the analogy

between bodily and mental development is perfect, and experience with the one should be suggestive for the other. No one would expect good results from loading the strong and the weak with the same physical weights; no more in the mental field should the same burden of exercise be given.

Manual training and drawing perhaps need no description. The methods in schools generally are more or less conservative of the individual. The courses of study here present certain typical exercises, based upon which are abundant supplementary opportunities, meeting the additional demands of the individual. No one with experience can question the immense contributing value of manual training in the making of students of independence, self-reliance, accuracy, neatness, finish, critical power, invention, and originality.

In vocal music there is gain, not loss, in aggregation of numbers. Consequently it is the custom to consolidate several rooms for singing. There is no attempt at individualization, except that from the pupils of several rooms, and by utilizing one or more of the teachers made available by such consolidation, a section is often formed for the special training of those having individual needs or capacities in music.

The demands in reading are perplexing, as they are by any method. Nothing in the school curriculum is more important, and yet nothing is more difficult to teach. Happy is the teacher who produces good readers. In these schools perhaps there is nothing in the reading that is characteristic, excepting certain attempts in silent reading and in the utilization of representative readers. In other respects the methods are similar to those customary elsewhere.

The question naturally arises, What are the results accruing from this plan of work? I am well aware that only a generation can produce evidence upon which a complete verdict can be rendered. Nevertheless, the eyes of an intelligent school executive should be able to recognize determinative value wherever and whenever he sees it; otherwise he is scarcely qualified for his office. I would therefore enumerate the following principal results:

1 *Better health*—The work of the schools is carried on under normal conditions. There are no excessive hours of labor. There is no excessive nervous tension because of false incentives and unjust comparisons. There is no demand upon the brain when it is exhausted. There is a strong, healthy, vigorous stimulus to the mind because of the engaging work; but this is followed by abundant opportunity for relaxation. When a student leaves school in the afternoon he turns the key on his school books and schoolroom work, and his energies find expression through some other channel. So it is that pupils who heretofore have been almost denied the privilege of school are now doing excellent intellectual work under circumstances that are bringing to them the blessings of physical health. If this experiment stands for anything, it is for nothing more than this, that proper habits of study are not merely permissive of health, but conducive to it, and that the direct product of schools may be a symmetrical, robust, and vigorous physique.

2 *The trained, independent, self-reliant worker*—There is an intellectual health as well as a physical. Educative value in an exercise exists up to a certain point of nervous tension; but when vigor and healthy attention are passed, and the mind no longer reacts promptly on demand, there is loss, not gain, in continued exercise. Under such conditions a student *may* continue his long-protracted hours of effort, until at last his work stands out as a completed thing; but what of the worker, and what is the value of his work?

The pupils of these schools rapidly become trained workers. The very confinement of work to legitimate hours conduces to better habits of thought. There is no dissipated attention and consequent scattering of energy through several hours when less time would be sufficient. The pupil realizes that a lost hour cannot be made up by later application, and consequently every effort is one of earnest concentration. There is no passiveness or dead time to encourage wandering thought. All the work, being done under direction, is better done. Beyond that, the entire plan encourages independence and self-reliance. No one is carried by another's effort. Each

pupil is the absolute maker of his own success. The scene never presents itself of a group of pupils on the way to school or about the building, with one bright pupil reading the Cæsar lesson to several others; for the reasons, that the several pupils are not working simultaneously on the same lesson, that there is no incentive excepting the work itself, and that there is no opportunity because all books are kept in the working rooms. No parent has an opportunity to work his child's examples at home. In every respect, the individual rises or falls by his own efforts, excepting as he is directed by the ever-present teacher. Because of this there is great intellectual advantage. There is now scarcely a student, having passed two or more consecutive years in this high school, who cannot be said to be almost an ideal student.

3 *There is more work accomplished, and the work is more thoroughly done*—When this method was first inaugurated I rather expected that less work would be done, but that this would be compensated for in the better results gained. The experience of the schools has shown that more work is done, and better work as well. The lower grades have as a rule completed all the usual assignments and have called for more. The universal experience of schools formerly was that with the development of modern educational demands, the introduction of the so-called special branches, there was an enormous increase of subjects without any increase of time to be given to them. The continuous cry, loud and prolonged, was, Where shall we find time? That difficulty has disappeared. With the lessening of time at our command, there has been the absolute gaining of time. In so far as pupils have been trained with us, we have an abundance of time and the opportunity for additional enrichment of the courses of study. In the high school the gain has been very pronounced. For instance: The elementary Greek pupils have all by the inductive method reached the second chapter of the Anabasis in three months' time; and, with the actual qualification on the first chapter, have covered all the elementary studies and exercises necessary to such reading. Other pupils have nearly covered the first and second books of

the Anabasis in four months. In Cæsar several have read the first and second books in four months; and others four orations of Cicero. In other departments the results are proportionate. The work is not only done, but done thoroughly. The student has not been carried on by the qualification of someone else in a class recitation, but by his own actual preparation, recitation, and examination upon every step of his work, including everything that is incident to such study. It should be remembered that these same pupils, those in Latin for instance, have also carried daily work in Greek or science, mathematics, physical culture, music, and manual training, besides the more infrequent exercises in rhetorical practice.

4 *There is more enthusiasm in work*—It is sometimes said that the class is necessary to maintain enthusiasm. We do not find it so. One of the characteristic features of the school is its spirit and enthusiasm. There is something oppressively discouraging to an ambitious student who, after sitting inactive in a class for an hour, is told he must take the same lesson over again, because of faults not his own; or in like degree, but from an opposite reason, is the discouragement of the one at the foot of the class who flounders in a labyrinth of difficulties from being hurried prematurely over ground he does not understand. On the other hand the student who works as an individual is full of conscious pride because of conscious advancement. The opportunity for daily and continuous promotion is an immense stimulus, and the school fairly glows with enthusiasm and interest of the most healthy character. There being no unnatural incentives the pupils are brought face to face with the work itself, without seeing "through a glass darkly," and consequently there arises a pure love for the work that is a determining factor in the composition of the school.

5 *There is less discouragement*—Absolute provision exists for each particular individual. Every boy and every girl finds a place in the school, and that place is his or her own. The great aim is that the school shall fit in and around each specific pupil. There may be apparent loss in mechanical excellence, but the compensation is great. By the ordinary plan of school

grading the pupil who enters two or three months late in the year must needs be graded with a class a year lower. To many a boy or young man this loss compounds itself. Again, at the end of the year an arbitrary line arises between those who can make promotion and those who cannot. The perplexity finally resolves itself into allowing the doubtful one who is just above the line to go on to flounder through higher difficulties, while his fellow, a little below the line, must duplicate the exact steps of the past year. The result is that the graded school, or the graded college, becomes, possibly, an institution of high standard; but it falls short of its full stature and possibilities, because of the loss of "the great multitude that no man can number" who fall discouraged by the wayside. Not so the school for the individual. It appeals to and holds him, because it permits him to work in his own place and according to his own strength. If, perchance, he enters late, or is necessarily absent, the loss is only proportionate; for no class determines his working place or his progress. There is no such thing as non-promotion, for at the beginning of the year each pupil begins just where his work stopped. The result is the holding of pupils who otherwise would be lost. The question is often asked, What of your indolent pupils? Does not the plan permit pupils to be indolent? The fact is, the indolent pupil is largely the product of the school. Discouragement upon his part, misunderstanding by his teacher, are too often the cause of indolence. Given a school adequately providing for the individual, and indolence will give place to thrift and energy. The pursuit of an education is, in itself, attractive, but the environments of the graded school are sometimes difficult to overcome.

6 *There is more opportunity for additional and outside work*—Pupils are encouraged to read good literature and have time to do so. There is opportunity for attendance upon lectures without loss in school work. Scientific investigation by simple home experiments is a fruitful exercise. Voluntary work in construction, in composition, and in development of the inventive and creative faculty finds its place in the home.

There is opportunity in a hundred ways for the impulses received in school to find expression. Music and recreative pastimes have proper provision made for them. The demands of the schools do not crowd to the wall the duties and relations of home, church, and social life.

It is apparent that this method of work calls for strong teachers, but that is no loss to the school. The teacher cannot rely merely upon the preparation of the previous evening to meet the demands of the day. She must be equally ready upon a hundred points. Nothing will successfully carry her through her work except good previous training and wide general preparation. The schools of Pueblo are well blessed in teachers of this class.

Description has been given of our methods of work and of the results that accrue from them. It is but fair to remark that the conditions prevailing in Colorado during the present time of general financial depression have presented difficulties to almost any plan of work. An inadequate though capable teaching force, an increased enrollment in the schools, and diminished appropriations for supplies characterize the present year. The fact that results have been so pronounced under such trying circumstances is a great demonstration of the practicability of the plan of work. The conditions of the year are not ideal. In spots the work is not all it should be, but this can be said of almost any school under almost any conditons; nevertheless, the average of results will more than support all my statements.

In conclusion, the writer does not pretend to say that this is the best school, or the best plan of work. A description of the work in progress has been given because of a demand for it. Comparing his schools now with those seen previously in a long administration of schools, he does not hesitate to say that the results now reached are very much better and more easily attained. The present happy condition is not the result of any one radical thing, but a development of many things. The schools are not crystallized; they scarcely have a method, but they have a plan.

It has often been said that in view of the general demands of mass education provision cannot be made for the individual. If the Pueblo experiment and this article stand for any one thing, it is simply this: provision for the individual can be made, for it has been done.

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VII

EDUCATION IN FOREIGN PERIODICALS

Girls' Education in Italy

FROM THE LONDON "JOURNAL OF EDUCATION"

"One can fancy the average reader's thought as his eye catches sight of the title of this article. It will be something like this: 'What have "Education" and "Italy" to do with one another?' For though, perhaps, of all the European nations, Italy and England have most in common and are most in sympathy, yet it is not the living energy of the modern Italy that attracts us, but the Italy of ancient history and of the Middle Ages; the storehouse of scholarly and artistic treasures; the land whose past glories and ever present beauty seem the common inheritance of all educated people. Italy is to us English the home of art and the cradle of European civilization. As such we revere and love it.

"But I hardly think we realize or respect enough the wonderful transformation that has been going on since 1848 in Italy, or, to go back a little earlier, since the beginning of the present century. It is true that the history of those first fifty years is still too near to be related calmly and dispassionately. The principal actors have passed away, indeed, but their children and near relatives are here, and the strife of party, political and religious, the terrible cruelty, the wild agitation, the torture and bloodshed, still make the narrator's heart beat and his passions rise, so as to blind his judgment and prevent his being an impartial chronicler of facts. But though we cannot form an adequate idea as yet of the great revolution which broke up and scattered the network of tyranny and misrule that held down the peninsula of Italy, and out of dire confusion evolved the united and great nation we see before us now, still the great fact remains, and as one considers and wonders at the solution of so difficult a political problem, one takes heart of courage for the future—even of Ireland!

"But to return to our immediate subject. Let us see what Italy has done and is doing for the education of her people,

and especially for girls and young women. We will go back to 1848 and see what those first Ministers of state had before them when they contemplated formulating laws for national education. At that time, as far as the mass of the people were concerned, the keys of knowledge lay in the hands of the religious orders. It was their business to instruct the children in the Church Catechism, and, for the rest, the less the better —the consequences of which negative instruction may well be imagined. The girls, besides, learnt to sew, knit, and embroider. There were, of course, exceptions, where girls as well as boys had exceptional parents and advantages, generally accompanied by gifts of genius; but these shine out the clearer from the dense ignorance that prevailed around them.

"To limit the teaching of the clergy to that of religion, and to give them a share in the general scheme of national eduation, was the first endeavor, but after many useless discussions it was found to be impracticable to combine with the Church of Rome. Then the professors of the numerous universities, who, justly proud of the ancient glories of their schools, had thought to take the lead in the national scheme of education now that Italy was united, were bitterly disappointed when the examples of France and Germany at length prevailed over that of England, and the Government decided on centralization in itself. 'When Italy was enslaved politically, education was free; but when Italy broke her chains and became free, she enslaved education': these were the words of the professors. 'Education for the gifted, by nature or circumstance': this was what they meant. The universities would have pushed on the higher education without regarding the needs of the great majority. But it would take too long to trace the course of events with regard to this subject through the years immediately following on the Constitution. Suffice it to say that the present system, based on the continental principles of centralization in the state, was made law in 1859, and, though modified by succeeding Ministers, is essentially the same as then, having for its head the Minister of Public Instruction at Rome, its centers in the prefectures of the provinces, at the head of which is the *Provveditore a gli Studii*, under whom all schools, municipal and private alike, are worked, as regards the certificating of the teachers, the examining of the pupils, and the direction of their studies.

"In each commune the mayor and a committee formed

from among the municipal members, or chosen by them, administer the local schools, according to the laws of the state. All local questions, as of site, sanitation, morality, board of examination, appointment of the teachers, and discipline, are referred to, and finally settled by them.

"The same law, enforcing education on all children over six years of age, in every class of society, prevails in Italy as in Germany; and if it be ascertained that any child is not being educated, the civil authorities inquire into the cause, and, if there should be none forthcoming, they can oblige the parents or guardians to provide education.

"The municipal schools are free for the elementary courses. The teachers are paid by the commune. At Turin, the masters of city schools receive 1500 francs per annum, the mistresses 1175 francs; the masters of suburban schools 1100 francs, the mistresses 900 francs; these latter in addition have free lodging or 150 francs, and the mistresses 50 francs, as extra fee. At the end of ten years these salaries are increased by 100 francs, and an additional increase of 100 francs after fourteen years of service. Some of the suburban masters teach as subordinate masters in the city schools, thereby increasing their incomes by 150 francs.

"Besides the elementary schools, but in connection with them, there are: (1) complementary classes for girls who are preparing to be elementary teachers, wherever a sufficient number of such is to be found, pupils paying each a fee of 30 francs per annum; (2) classes for needlework on Thursdays, 5 francs per annum; (3) night schools for drawing and commerce, at 3 francs and 20 francs; (4) an industrial and professional female school, where the course extends over seven years, and includes commercial and household subjects, telegraphy, and drawing for industrial pursuits, fee 50 francs; a preparatory class for the above, 20 francs; courses of special individual lessons, each 20 francs; (5) a school of embroidery for commerce; (6) a holiday school for commerce, and one for French, at the rate of 5 francs per annum.

"All these schools are established and maintained by the municipality of Turin.

"One other remains to be specified, specially favored by the royal family of Italy, namely: (7) the National Institute for the Daughters of Italian Soldiers, administered by a council of nine members, nominated equally by the Minister of the

Interior, the Minister of War, acting under the King's orders, and by the Municipality of Turin, and placed under the superintendence of a committee of twenty-four ladies, under the presidency of the Queen.

"This institute is divided into three divisions, held in as many buildings, as follows: (1) The High School, for which the King ceded the Villa della Regina in the suburbs of the city; (2) the Magisterial School, where the programme of the normal schools belonging to the Government is followed (a kindergarten is annexed to this); (3) the Professional School, to prepare for commercial pursuits, after passing the elementary courses.

"The orphans of soldiers, according to their condition in life, are received into these schools (1) gratuitously, if very poor, or (2) on paying a very reduced rate annually. Pupils whose parents are living, and the father in active service, pay at the following rates: In the Villa della Regina, per annum, 600 francs; in the Magisterial School, 400 francs; in the Professional School, 300 francs; in the Kindergarten, 250 francs.

"The Villa della Regina School, for the daughters of military men, holds first rank among the schools for girls in Italy. Girls not belonging to the class for which it was intended are admitted at twice the ordinary fees. These fees are boarding fees.

"Next to this institution is the school of Regina Margherita. This is, however, a day-school, and is analogous to our high schools. It is held in part of an aristocratic old house in one of the principal streets of Turin. The entrance to it is not encouraging, and though the rooms are lofty and well-lighted, the situation is far from healthy. I was glad to learn from Professor Luino, who is *Regio Provveditore a gli Studii* for the province of Turin, that the municipality had chosen a better site for the school. Girls entering this school must have passed the fourth elementary in the municipal schools of Turin, or they must pass an examination equivalent. There is a preparatory class for those who are not able to pass this. This class prepares for the first class of the secondary or superior school-course, the study of French being added to the subjects of the fifth elementary. The fees paid by pupils are annually: for the preparatory class, 100 francs; first two years of the course, 160 francs; two last years, 200 francs. Pupils can be admitted to a single course of study, though not

belonging to the school, on a payment of 50 francs the single course.

"At the risk of overlading my readers with detail for the chance of interesting a certain few more cosmopolitan than the rest, I will add the list of the teachers' stipends in the Margaret of Savoy School. Teacher of moral science, 600 francs; Italian literature, 1400 francs; history, 1000 francs; natural history, 200 francs; the elements of physics, chemistry, and hygiene, 1000 francs; French, 1400 francs; German, 700 francs; English, 700 francs; arithmetic, geometry, and book-keeping, 800 francs; drawing and calligraphy, 1200 francs; part singing, 300 francs; needlework, 1200 francs. Three mistresses are chosen from among those employed in the elementary schools for teaching Italian, geography, and arithmetic. These mistresses receive, in addition to their ordinary stipends, fees of 100 francs. German and English are extra subjects, and are not included in the obligatory lessons, of which there are thirty hours a week.

"In looking over the table of the week's work, according to the different years of the course, one is struck by the great proportion of time given up to needlework. In the preparatory class seven hours a week, in the first year five, and in the remaining three years four hours are devoted to this art, which includes all plain work and even fine embroidery. Two mistresses, each paid as highly as the teacher of drawing and handwriting, are required for the school.

"It is curious to see, by the way, drawing and handwriting coupled together, for both subjects are quite differently taught in Italy, drawing being, in girls' schools, much less a matter of art than of neat-handedness and accuracy, and all comprised in freehand and copies from the flat. Handwriting, on the contrary, is most elaborately taught, including ornamental writing, gothic letters, etc., and even the shading of such letters. French and arithmetic are very well taught, and the pupils really learn to speak French and to use arithmetic for the common purposes of life. Surely, the teaching of keeping accounts in an orderly way is good for all girls, whatever their rank. Religious instruction is not given at school. The moral teaching is, however, very full and good—teaching duty to God and man and to one's self, in the first two years; then of virtue in general and the moral virtues in particular; the fourth year, of the rights, duties, and offices of the woman, kinds of

government, and in particular that of Italy, the rights and special duties devolving on her subjects; the co-ordination of all duty to a supreme end. History, during the first year, is entirely that of ancient times, necessarily sketchy, as it carries the pupil from Hebrew times, through Grecian history, and up to the predominance of Rome in the Mediterranean, in that one year. The second year is occupied by Roman history up to the height of feudalism. The third year relates of the Middle Ages and after the fifteenth century till the Treaty of Chateau Cambresis. The fourth year follows the course of modern history in Europe, the Thirty Years' War, the Seven Years' War, etc., the French Revolution, Napoleon I., the Revolution of 1848, and all its followings, up to the Congress of Berlin. Geography is treated more practically than with us. The first year is devoted to the science of the maps and of the earth as represented on them, and the great divisions of earth and ocean. The second year instructs in commercial geography, political Italy, European states, and the relations of Italy with the other European states as regards commerce. The third year treats of Asia, its states, its lines of navigation and of telegraphy, its political and commercial relations with the European states, and especially with Italy; of Africa, its countries, its lines of communication, and relations to Europe, and specially to Italy; of Australia, its political geography, oceanic islands, and communications; the Polar regions. The fourth year takes in America, its states, navigation, and telegraphic lines, and political and commercial relations to ourselves and Italy in particular; then Italy in detail up to date; and finally the latest geographical discoveries. Natural history and physics are only taught in the last three years of the school-course. Natural history (to which, as to physics and chemistry, two hours a week are allowed) includes botany the first year, zoology the second, and mineralogy and geology the third. Physics, after the necessary introduction, teaches heat the first year; magnetism, electricity, meteorology, and acoustics the second year; optics, chemistry, and hygiene the third.

"I have quoted hitherto entirely from the time-tables of the Margherita di Savoia School, as being a day-school of first rank, and also because I am acquainted with English girls who have been educated there, and who would do credit to any school. They are much attached to their old school, and

gave me many details that showed me that the teaching there was sympathetic and thorough. Naturally enough the English of these girls is defective in idiom and ease, but as an acquired language would pass muster.

"So far I have spoken of municipal schools only, but there are countless private schools in every city and town of Italy; many of these are taught by nuns. Their internal regulations, religious instruction, and minor details are settled by their own authority, but they are required by the state to have certificated teachers, and to follow the state programme of studies. Some of these schools are very highly thought of in Italy. The Sacro Cuore at Turin is a very aristocratic establishment, and the Annunziata, at Florence, is in the same category. They are old-established convent schools, into which the new learning and the new regulations have introduced much needed reforms. The teachers are well-born ladies who have submitted to the curriculum imposed upon them as the means of requiring the necessary certificate, as a part of a life system of obedience—perhaps, by the way, the mental training and wider intellectual scope enriching and rendering happy their whole lives.

"In many instances the municipal schools, especially in the country towns, are taught by nuns. They make excellent teachers of Froebel's system, and are patient, bright, and gentle with the little children under six. In fact, it has seemed to me they do better for this charge than the lay-teachers, looking less fagged and worn than the latter—for the reason, perhaps, that they have no cares but those of the school, and no social joys but connected with them and their community. The care for daily food and support, dress, etc., is unknown to them.

"Where the municipality have chosen the nuns as teachers it proves that the majority of the votes have been for distinct religious teachings to be given by them according to the Roman Church. In some towns the boy's schools are provided for by the Don Bosco Society, by the choice of the municipality. Motives of economy often suggest the choice as well as religious motives, though the latter prevail among the middle classes.

"The nuns do not, I think, make such good educators of girls from twelve to sixteen as lay-teachers. They pay little attention to manners and physical training, and are timorous

of anything approaching mental liberty in the pupil. Narrow, affectionate, and mind-stunting is the most fitting description of the system adopted in their schools generally, although there are happy exceptions where a Superior is a talented, high-spirited, and high-principled woman, who has remained many years in one school and gathered about her a staff of carefully selected teachers. In such a school one meets with the highest type of the system, and even here for elder girls a want of breadth of idea is perceptible, and a shutting out of the social problems which the girl meets with as soon as she leaves the convent school. The influence which a nun has over her pupils is too soft and effeminate (as it were), and too narrow in its scope, to bear weight upon the life of the young woman. She (the nun) has no enthusiasm of learning in herself, and inspires none in her pupils.

"It will have been seen that the elementary schools are framed to fit on to, and dovetail into, the secondary or superior schools. This is an excellent thing, and one which might be desirable at home in England if it could be had without sacrificing other good things. It is an eminently good thing that a girl can go to school for next to nothing till she is twelve years old, and then pass into a high school, where the cost of her training (reduced for sisters) is under eight pounds sterling a year. But where do we see the children of gentlefolk attending the national schools in England, as they do, in all simplicity, in the country places of Italy? It has its very good effects on the child's character, both the child of the poor parent, as well as that of the richer, and the latter's parents are thus induced to take such an interest in the government and welfare of the school as no mere philanthropy can instill, and which bears fruit in carrying out improvements in the equipment and general arrangements of the schools—improvements that profit the whole society of children, in whose association as scholars under one roof will be less loss and more gain as the refining influences come to bear upon the children of the poor. In fact, the pride of class and caste is much less aggressive in Italy than in our England. While the question of religious instruction is being so hotly discussed in England, it is *à propos* to observe that in Italy, as quoted in the *Ministerial Tract* of 1888—a noble treatise on the reform then introduced into the system of instruction—the example of England with regard to the religious instruction has been followed, and has been found

to work admirably well. The school-course does not enter upon matters of faith, except by deliberate choice of the municipality, who represent the townsfolk. The clergy of the parish have care of the spiritual education of the children, and, having themselves been pupils of similar schools, they know how to work the catechetical instruction at church with the general surroundings of the child's life.

"Yet the contrasts of opinion have been greater and more difficult to conciliate in Italy than in England, and it would seem, on reflection, that the present excellent results could only have been arrived at by the unity of action, the leveling of caste pride, which has brought to bear upon the general question the influence of the well-educated, as immediately interested in it through their own children."

VIII

DISCUSSIONS

HIGHER ACADEMIC DEGREES IN PEDAGOGY

At the outset, is it not very doubtful whether there is any appropriate place for special degrees in pedagogy? For pedagogy is merely a branch of philosophy, an application of the principles of ethics and psychology to determining the aims, the means, and the methods most likely to be effective in the training of children and youth. It has always been so considered and treated since Kant, from his renowned chair of philosophy in Königsberg, treated pedagogy as one of his proper subjects; since Herbart inaugurated his distinguished career as a philosopher by a course on pedagogy in Göttingen, and later, in the chair of Kant, made this a chief object in his courses, gaining thereby an influence on German education which seems likely to preserve the memory of his name when his philosophy, save in its relations to pedagogy, may be forgotten.

But the degree of Ph. D. already exists for the philosophic disciplines in their wider sense, including language, history, and economics. What reason, then, can be assigned for creating a special set of degrees in pedagogy which would not be equally good for giving special doctorates in history, in economics, and in languages, or for like degrees in mathematics, chemistry, and physics? The same end would be attained, without a confusing multiplication of degrees, by conferring the well-known M. A. for distinguished attainments in pedagogy and the history of education, and the already-used Ph. D. for such attainments coupled with valuable contributions to this branch of philosophy.

It is to be feared that the proposal of special degrees in pedagogy might be suspected by an uncharitable public to be inspired by a desire to gain cheap doctorates on the part of ambitious teachers who could not hope to gain the usual higher degrees on the conditions prescribed by our best institutions. Such a suspicion, with even slight justification, would be likely

to revive the derisive meaning long attached to the word pedagogue and its derivatives, and to make even well-earned pedagogic titles undesirable to self-respecting teachers.

Let us look at this matter from another point of view. If we concede for the moment the expediency of creating special pedagogic degrees, the question at once arises, By whom and on what terms they shall be conferred? It is obvious that this twofold question is of vital importance if the danger is to be avoided of having pedagogic titles become marks for obloquy rather than honor.

With regard to the first branch of this question there would seem to be little room for a difference of opinion. No institution should assume to grant such higher degrees which has not ample facilities for affording the extended instruction which advanced pedagogy at present presupposes. Comparatively few such institutions are now to be found in this country, and these, with few if any exceptions, are content with the existing higher degrees for their advanced students in pedagogy. Doubtless no one will claim that normal schools, however respectable they may be, should assume to grant a master's degree or a doctorate in pedagogy; for their diploma of graduation is sufficient merely to admit to the lower classes of our best colleges. The real difficulty to be apprehended would be likely to arise from the tendency of weak colleges to lavish such degrees as honors on merely nominal terms; and this, in the case of newly-created degrees, would be especially detrimental. It cannot reasonably be doubted that pedagogic degrees would be peculiarly liable to this kind of deterioration.

The real point where differences of opinion are likely to arise will probably be connected with the question of the terms on which higher pedagogic degrees should be conferred. As advanced degrees, it certainly seems reasonable that, like other advanced degrees, they should presuppose the completion of a thorough college course before the commencement of the studies leading to them. On this point there would seem to be room for no serious difference of opinion, for, without this requirement, the danger that such degrees would be rendered contemptible by being cheapened would at once be converted into a certainty. The question of study in residence at some higher seat of learning, under the guidance of professors, is one that may here be left in abeyance; since,

though highly expedient, it may be conceded that it is not absolutely essential. It is well, however, to remark that the general tendency among our best institutions is to require resident study for all advanced degrees, aside from the too large list of mere honorary titles. This tendency probably arises from the grave abuses into which study out of residence too easily runs.

Taking for granted, therefore, merely the preliminary requirement of graduation from some reputable college, it would not seem too much to expect from the candidate for a master's degree in pedagogy that he should have a sound acquaintance with ethics and psychology, the fundamentals of his subject; that he should have such knowledge of the history of education as may be gained from the not numerous treatises on that subject now accessible in English, supplemented by such works as Mullinger's account of the schools of Charlemagne and Compayré's *Abelard;* that he should have such familiarity with the theory of education as may be gained, for example, from a thoughtful study of Bain's one-sided *Education as a Science*, corrected by Lange's *Apperception* and Herbart's *Science of Education*, and supplemented by some easier German work like the second part of Dittes's *Schule der Pädagogik;* and that he should prove his mastery of these subjects, either by an examination, or by a thesis on some pedagogic subject succeeded by an examination. On such terms only, I believe, would the master's degree in pedagogy be entitled to credit.

The degree of doctor in pedagogy should obviously be a more serious matter, for it should be the crowning honor that may be gained in a profession second to none in importance. It should therefore be conferred only for manifest superiority, tested during at least two years of study of pedagogy as a major subject, and exhibiting not only rich fruits of study, but also some ability in original investigation. As regards attainments, the more elementary course just outlined should be enlarged by some knowledge of the history of philosophy; by such deeper acquaintance with the history of education as may be gained from works like those of Karl Schmidt, von Raumer, and Denifle, or from Paulsen's *Geschichte des Gelehrten Unterrichts* and Compayré's *Histoire Critique des Doctrines de l'Éducation en France;* and by the mastery of some treatise like Th. Waitz's *Allgemeine Pädagogik*, or Beneke's *Erziehungs- und Unterrichts-Lehre.*

The thesis is the proper test of originality and power of research, and for this pedagogy affords a wide range of fruitful work. The history of education has abundant fields still but imperfectly explored. The relative educational value and efficiency of groups of studies is a question that has not yet reached any generally accepted solution, and is still discussed in a partisan rather than in a scientific spirit. The work so well begun by Preyer and Perez with possibly exceptional children, admits, under favorable circumstances, of a wide and profitable extension. The contents of the youthful intelligence at various stages of development will richly repay a systematic investigation, the best means for which still await the ingenuity of explorers. More than eighty years ago, Herbart clearly saw what the mass of teachers still but dimly apprehend, viz., the difficulties arising from the inability of the mature mind to conceive and adapt itself to the child's point of view and mode of approaching subjects; and he proposed a curious expedient to obviate this difficulty in the special case of languages; can a better and more general solution of this problem now be offered? These are but hints which need not be multiplied, of lines of investigation in which originality may be shown and a philosophical grasp of facts manifested.

Whether theses for the doctor's degree in pedagogy should be required to be of such originality and excellence as to warrant their publication as contributions to pedagogic science, is a question which, however legitimate, we need not here discuss. The question of successful experience in teaching as a requisite for the doctorate would present greater difficulties—difficulties too of a kind that might well suggest the need of great caution in offering such a degree. It will doubtless seem to many, and with good reason, that to confer it on merely literary requirements such as have been proposed, though they might suffice for the appropriate Ph. D., would be to ignore the important fact that practical skill and tact in applying pedagogical principles to the work of education and instruction, is the chief reason for the study of pedagogy as a science; that ability to *do* as well as to know is here of paramount importance; and that to grace with the highest pedagogic title a man who might prove to be but an indifferent educator would be peculiarly unfortunate. Yet useful as training classes unquestionably are when they are attainable by our universities, it is more than doubtful whether they afford any reliable test of the real edu-

cative efficiency of the candidate for the doctorate; since personal qualities, and the development of ready tact under a sense of responsibility, here weigh quite as much as literary outfit. The exercises of such training classes can at best do no more than afford some indication of probable skill in instruction, which is not wholly synonymous with education. This question may rightfully demand the serious consideration of institutions that contemplate the creation of higher degrees in pedagogy. Meanwhile it may not be amiss to suggest that where the aspirant for the doctor's degree is not already a person of approved experience in teaching, it might be expedient, when the literary requirements have been fulfilled, to delay the conferring of the degree until skill in the application of principles has been proved by the successful management of schools.

Should the terms that have here been proposed seem to any one to be too stringent, they may at least suggest the care with which such new degrees need to be guarded that they may not incur the risk of becoming contemptible. For myself I do not see their necessity or expediency, believing that the existing higher degrees amply cover their legitimate ground; but if conferred at all, the amount and kind of work already outlined will be found no more onerous than that usually required for the degrees A. M. and Ph. D. in our best universities.

SAMUEL G. WILLIAMS

CORNELL UNIVERSITY

THE ACCREDITED SCHOOL SYSTEM OF THE UNIVERSITY OF NEBRASKA

I have been asked to state briefly the method by which the University of Nebraska receives students from accredited schools.

We determine a number of studies which are practically preparatory to the university, taking care to include nothing that is not preparatory. These are arranged on a system of credit points; twelve to fourteen of which are sufficient to enter any university group. Any school ready to offer to our satisfaction any six points in this group, will receive recognition. We are able to recognize this comparatively low number of points because we still maintain preparatory courses at

the university. We begin to drop these in 1895; and as they disappear, of course the number of credit points in the outside school will rise.

On request from the Board of Education, a school which proposes to become accredited is visited by some member of the faculty and carefully inspected. If the report is satisfactory, the school is placed on the list. We issue once a year a circular containing the accredited schools, arranged in the order of the number of points for which they are accredited. Opposite the name of each school appears the name of each preparatory study which it offers, under which is the credit given by the university for that study to that school. Just before the annual meeting of the Board of Education we send a statement to the Board of the exact credits granted the school in the year previous. We ask that any changes that are to be made in the curriculum for the ensuing year be reported to us; as well as any changes in instructors.

On the 1st of September we send to the principal of the school so accredited a statement of the course in the school as reported to us, for the prior year, and the credits which we granted therefor; and ask again that any changes that have been made, or are to be made, may be noted. About the 1st of November we send a blank to the principal, on which we ask him to report the work strictly preparatory to the university, which he has reasonable grounds to believe the school will complete for the year. This report gives us not only the textbooks and the amount of ground to be covered, but the number of classes, the number in each class, the length of the recitation period, and other educational data. About the 1st of May in each year we send to the principal a blank on which he is to report to us the students who satisfactorily complete the course, with the grade of each in each subject strictly preparatory to the university. This report is filed with us.

On the basis of this report, we issue to each student directly a card certifying that we have the report for these particular studies (naming the grades in each) and have accepted the same. At the bottom of this card we put a note saying that if the holder ever desires to enter the State University, this card may be handed to the registrar in lieu of entrance examinations in the subjects named. All students coming here in the following September present these cards and receive credit accordingly.

This brings us in touch with a school five times each year, aside from such information as is easily gathered from inquiry, occasional visits, the assembly of the State Teachers' Association at the university each winter (bringing a large number of principals together), the spring meeting of the Principals' Association, and other similar means. The university reserves the right to demerit at any time any student whose work is found not to correspond with the records sent to the office, and upon which he was admitted.

We are more than satisfied with the certificate plan.

JAMES H. CANFIELD

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PROFESSOR HINSDALE ON THE CITY SCHOOL SUPERINTENDENT

Professor Hinsdale, in his article on "The American school superintendent," published in the January issue of the EDUCATIONAL REVIEW, expresses a somewhat pessimistic opinion of the educational abilities and attainments of school superintendents in large cities, and a view that is more than gloomy of what this office is to be and to accomplish in the future. He has reached the conclusion that in the large cities the superintendent will, as a rule, more and more tend to "machinery and administration"; that he will become even more an office man than he now is; that he will be less known in the forum of educational thought than he is at present—"which," he adds, "is certainly saying a good deal." Had Professor Hinsdale presented the evidence from which he formed his opinion, the world would probably have been more interested than in the fact that he had reached a conclusion. In the absence of this evidence, however, it may be pointed out that it by no means follows from a superintendent's tending to administration and machinery—whatever that is—that he will be less known in the forum of educational thought than at present. Administrative ability and sound thinking or rational discussion are not incompatible. It is true that the university professor—the professor of pedagogy quite as much as any other—has generally failed to understand how a man may lead the "intellectual life" and be a man of action at the same time. And yet in every walk in life there is abundant evidence that the

purely intellectual and the purely administrative exist side by side in the same minds.

Indeed it needs only the parallel case cited by Professor Hinsdale to prove the inherent falsity of his position. "College presidents," he tells us, "are quite a different class of men now from what they were half a century ago. In the great colleges, at least, they are coming to stand more and more for administration and less for scholarship and pedagogical attainments." In one sense this is true. It is true, for instance, that Presidents Eliot, Low, Angell, Gilman, Schurman, Harper, and Jordan stand primarily for the administration on sound business principles of the institutions over which they preside. But is it true that they stand less than their predecessors for scholarship and pedagogical attainments? Waiving the question as to whether these gentlemen are great scholars—which is not the question at issue—it may be confidently asserted that they are one and all doing more than any of their predecessors ever did, to raise the standard of scholarship in the American university and to make high pedagogical attainments possible. To take the most conspicuous example: President Eliot, while he is above all things an administrator, has done more to accelerate educational progress in this country—not in the university alone, but in the preparatory school and the grammar school—than all the professors of pedagogy taken together. In like manner, it may be that there are superintendents in large cities who, by devoting much time and attention to administration, are creating the conditions under which educational reform is possible or at least easy. Certain it is that never before was educational thought and discussion so active as during the last ten years; that during no preceding period were so many reforms introduced into city schools; that never before did city school teachers evince so great eagerness and diligence in the study of the literature of their profession; that never before were boards of education so ready to listen to propositions for the broadening and deepening of public school work. For the creation of these conditions no one will deny a fair share of credit to many school superintendents. And if such be the case, the fact is due more to improved administration than to pedagogical lecturings or teachings.

Moreover, when the number of teachers is large, the question of instructing and stimulating them in their

work becomes primarily a question of administration. That one man should personally give all the instruction necessary to a body of teachers when that body exceeds, say three hundred, is an absurdity. As the number increases, the superintendent must more and more delegate the work of instruction to specialists in science, specialists in drawing, and the like. That the specialists shall work under the best possible conditions, the superintendent must adopt the requisite measures. He must be a man of administrative skill; but none the less must he be versed in educational science, for of all men specialists are those who most need wholesome restraint and whose work requires co-ordination. There does not seem therefore to be any good ground for the conclusions reached by Professor Hinsdale—that the work of superintendents of schools in large cities is now on a lower plane than it was some years ago, and that the superintendents themselves are inferior in ability and in influence to their predecessors.

If, indeed, the professor's conclusions are correct, then is public education in our large cities in a sorry plight. Whether they are so or not, it is obviously the duty of all true friends of education to strive to bring about such conditions that men of the highest attainments, practical and theoretical, shall be willing to hold the office of city superintendent of schools. That such men will seek the office is scarcely to be expected, while the term of office is limited to one or two years, while the best efforts are rendered abortive by vexatious restraints on authority, and while re-election depends, as is too often the case, on the favor of politicians.

WILLIAM H. MAXWELL

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THE PEDAGOGICAL SECTION OF THE MODERN LANGUAGE ASSOCIATION

The session of the pedagogical section of the Modern Language Association this year was devoted to a discussion of the article by W. Vietor in the November number of the REVIEW. A paper was read by Dr. Rambeau of Johns Hopkins, and followed by a general discussion, in which the following considerations appeared on or near the surface. The writer is of course responsible for what is said here, but believes that it represents the views of a majority of the active members of the association.

Every modern language exists both in a spoken or popular, and in a written or literary, form. The spoken language is used for the affairs of ordinary everyday life; but most matters which belong to the educated man as such are dealt with by means of the literary language; a man could never acquire through the ear alone a sufficient knowledge even of his own language for all the purposes of a liberal education in our time.

The ability to speak a language is an art, like playing a musical instrument, and is principally of value on account of its usefulness as a practical matter. Where there is much occasion to speak foreign languages, as in Holland, there is reason for making this art, like drawing, a part of a common school course; and every educated Dutchman speaks a foreign language or two as a matter of course. But in this country the conditions are totally different; except for the few who have to deal with recent immigrants, the ability to speak any language but English is of much less value for the average person than the ability to write short-hand, an art which brings into play much the same faculties. What an educated man wants of a foreign language is the ability to use books in it—the knowledge of the literary language.[1] It is only this which puts him in communication with the "best that has been thought and said" in that language.

We can get this ability by either of two methods, or by any compromise between them. We can begin by teaching, by object lessons or otherwise, the spoken language, and go from that to the written language without using translation, by the same process which children go through with their own language; or we can begin with the written language and go to work at once by translation and grammar study to get the reading knowledge which we want.

The former method is best adapted to the minds of young children, and the latter to those whose reasoning powers are more developed. The former is most successfully used by teachers whose native language is the one to be taught, and the latter by those whose native language is that of the pupils; the former calls for more work on the part of the teacher, and the latter for more on the part of the pupils. Of course no competent teacher confines himself

[1] This point is well treated in an article by Professor Calvin Thomas, in *Methods of Teaching Modern Languages* (D. C. Heath & Co., 1893).

to any one method for all cases, but uses whatever he finds to be best for the case in hand.

The unilingual method looks most complete theoretically, and is much advocated by pedagogical writers who never taught modern languages. Practically, however, we have to meet a "condition and not a theory." Students here take up modern languages at a much later age than in Europe. Their reasoning faculties are then well developed, and the nearest thing in their minds to a word or idiom in a foreign language is the corresponding one in their own. It is accordingly possible, by making the most of the translation method, to give them the reading knowledge they want in a year or two—an utter impossibility by the other method. Even if the unilingual method were desirable, teachers have no time in our ordinary conditions to do it justice; and finally, the mental discipline obtained through it is much less valuable than that obtained through the translation method properly used. It is then sound educational economy for us in America to leave modern languages till the pupils have reached a somewhat mature age, and then teach them in a way suited to that age—by dealing with the literary rather than the spoken language, and teaching it through the eye from the outset.

These conditions are not well understood by educators, still less by the public, in this country. Dr. Rambeau made the point that in Germany the *Sprachmeister*, whose business is to impart a practical knowledge of the spoken language, is classified with the music and dancing master where he belongs, and has no more to do with the work of liberal education than they. There is even more reason why he should be so classified in this country; the *Sprachmeister* and his methods have no more place in our higher schools and colleges than teachers of piano-playing and typewriting. But the fact is, that when a generation ago modern languages were first thought of among us as a factor in a liberal education, the *Sprachmeister* were the only people in the country who could teach them, and had to be taken to do the work in the colleges. Some of them rose to the occasion and became real educators with a true sense of the relations of their work, but many more did not, and so the modern language instruction in this country is still tinged with *Sprachmeisterei* to an extent which seriously impairs its usefulness and dignity.

The public, even the educational public,[2] still believes that the only end and aim of studying a modern language is the ability to speak it, and the idea that there is anything higher to be done with it has only gained ground with the most thoughtful educators. The Modern Language Association has done good work in the interest of a less narrow view, but all educators must understand the matter better before the work of modern language teaching in this country can be made what it should be.

Dr. Rambeau objected to the term "a new method," because we have already a surfeit of "methods" which use the same name.

Moreover, Vietor's method has almost nothing essentially new; it consists simply in the application of the usual expedients familiar to all teachers, in a way leaning toward the extreme unilingual method, with the one new element of making use of the new science of phonetics for a more intelligent teaching of pronunciation. The ability to do this is in so far a new resource, when a thorough-going practical phonetician has occasion to teach students of some maturity to pronounce with great accuracy. Such a state of things is so rare in this country that Vietor's method is for us little more than a pedagogical curiosity, and an attempt on the part of the rank and file of our teachers to use anything like what is set forth in Vietor's article would be a distinct step backward in the direction of the *Sprachmeisterei* which we are happily beginning to outgrow.

E. H. Babbitt

Columbia College

[2] For instance, in a paper on the educational value of modern languages, read recently before the Middle States Association of Colleges and Preparatory Schools, the view referred to was taken apparently as a matter of course, and no one challenged it in the discussion which followed.

IX

REVIEWS

Minerva: Jahrbuch der gelehrten Welt—Herausgegeben von Dr. R. KUKULA v. K. TRÜBNER—Dritter Jahrgang, 1893-94. Strassburg: KARL J. TRÜBNER, 1894, 861 pp. Price 7 marks.

The EDUCATIONAL REVIEW has already[1] directed attention to *Minerva*, which is an indispensable directory of the world's higher education. The third annual volume, which has just appeared, is no whit behind the second in comprehensiveness and accuracy, and adds certain new features that call for comment. An excellently arranged catalogue of the institutions mentioned in the book is prefixed to it. These are grouped geographically, and within each continent or country the institutions are classified as universities, libraries, observatories, academies and learned societies, and museums. The editor does not attempt too much with the American institutions for higher education, but lumps them together as "universities and colleges." Doubtless this is the safest plan to follow just at present, though, if the differentiation between universities and colleges proceeds at the present rate, it will not be ten years more before the two may be readily separated. This geographical catalogue is itself extremely useful, for it provides a convenient and well-arranged summary of the world's machinery for higher education and research.

Mr. Trübner includes the following American institutions in his list of the universities and colleges concerning which detailed information is given: University of the State of New York, Amherst, University of Michigan, University of Texas, Johns Hopkins, University of California, University of Colorado, Harvard, University of Virginia, Chicago University, Hamilton College, University of Missouri, Lafayette College, Dartmouth College, Cornell University, University of Kansas, University of Wisconsin, University of Minnesota, Vanderbilt University, Yale, Columbia, University of the City of New York, Stanford University, University of Pennsylvania, Prince-

[1] V: 192.

ton, Brown University, Columbian University, Williams College, and Clark University. Doubtless some reason could be given for the presence of every name included in the above list, yet it is obvious that it is either too short or too long. Amherst, Hamilton, Lafayette, Dartmouth, and Williams are frankly colleges, both in name and in fact. If they are to stand, a dozen or two more—such as Bowdoin, Union, Vassar, Rutgers, Oberlin, Marietta, Beloit, Trinity, and Wellesley—ought properly to be added. The simpler plan, however, is to omit all colleges that are and claim to be nothing more.

Should the editor adopt this plan toward American institutions, then a searching revision of the list of so-called universities would have to follow. Harvard, Yale, Columbia, Cornell, Johns Hopkins, Chicago, Stanford, and Clark would admittedly appear in any list of American universities, either because of their organization or the number and character of their graduate students. As to each of the others, however, at least three fundamental questions would have to be asked: (1) is there a distinct organization, faculty or other, for dealing with graduate students and advanced work; (2) is there any considerable body of graduate students pursuing advanced studies in residence as their chief or only occupation; (3) if the claim to be considered a university rests upon the presence of professional schools, then are those schools really scientific in character, and do they impose conditions of admission not less difficult than those required at the average American college? On the application of these tests there would be a rapid thinning-out of the ranks. The editors of *Minerva*, however, may well answer that we should perform this service for ourselves and not impose it as a disagreeable duty upon them.

In the statistics of university attendance given for the winter semester of 1892–93, and omitting Paris with its 10,164 students, because it is classified separately, Berlin heads the list with 7771, Madrid comes second, Vienna third, Naples fourth, Buda-Pesth fifth, Moscow sixth, Leipsic seventh, Munich eighth, Athens ninth (this is only possible by including students who are really receiving secondary instruction, but the same thing is true of the statistics of the American institutions), and Oxford tenth. Edinburgh follows, and then, twelfth in order, Harvard, the first representative of America. The University of Michigan comes fourteenth, Yale twentieth, University of Pennsylvania twenty-second, and Columbia

College twenty-fifth. If, however, the real university students were alone counted, no American university would be found among the first seventy-five names. It is possible that similar rigidity of standard might make many changes in the list of foreign institutions as well.

Misprints, despite the immense mass of proper names and technical terms, are exceedingly rare, and the volume is handsomely printed and bound. An admirable etching of Pasteur faces the title-page, occupying the place accorded last year to Mommsen.

N. M. B.

The Work of the Universities for the Nation, Past and Present—By R. C. JEBB, Litt. D., M. P., Regius Professor of Greek and Fellow of Trinity College. Cambridge: At the University Press, 1893, 52 pp. Price, 1s.

The Oxford and Cambridge dons are beginning to recognize that they ought to take an interest in education. It is not easy for them to overcome the habits built upon centuries of exclusiveness and narrow educational ideals, but the very considerable number of teachers who gather at the universities for the summer meetings, that have now become established institutions, exercise a wholesome influence and assist the new evolutionary process. And there are sympathizers in high places. The late Professor Jowett was one of them. A few years ago he was one of those who extended an invitation to the extension students to meet at Oxford. Desiring to find lodgings for some of them at Balliol College, he suggested to the dons that it would be a graceful thing for them to vacate their rooms for a fortnight, and allow him to assign the rooms thus set free to the visitors. The dons demurred, looking upon such a proposition as an invasion of their ancient and honorable privileges. The Master, however, had other weapons at his disposal besides persuasion. He had sole control of the chapel services and of the buttery. The former he lengthened very considerably, and the resources of the latter were reduced to the lowest ebb by his connivance. This policy had the desired effect, and the dons began to leave town for a holiday. As the last of them disappeared in the direction of the railway station, weighed down with hand-luggage, the Master rubbed his hands and said, "This kind goeth not out but by prayer and fasting."

Professor Jebb, like his lamented contemporary at Oxford, takes an interest in the life of to-day. He has come forward to assist in identifying Cambridge with the newer educational movements. The present pamphlet contains his opening address, delivered in July last, at the fourth summer meeting of the university extension students.

The theme is excellently chosen in view of the occasion and the audience. Professor Jebb's argument is, in brief, that the universities have always endeavored to respond to the demands made upon them by English life, and that their failure has been the exception, not the rule. He finds that the first period during which the universities had a distinct influence on national life extended from about 1216 to 1330 A. D. This was the golden age of scholasticism, and the English universities represented the best intellect and the highest knowledge that existed in the country. They were recognized by the nation as the exponents of its culture.

From 1350 to 1500 scholasticism declined. Semi-mysticism and inchoate skepticism crept in where defiant, dogmatic faith had once ruled unchallenged. The universities declined in vigor and in numbers. A national literature began to develop that was largely independent of their influence. The colleges grew at the expense of the universities. The latter clung to the moribund scholasticism, while the former identified themselves with the new classical revival. It was not until the time of Elizabeth that the conditions were sensibly modified, and the universities showed signs of a new life.

The seventeenth century saw a long series of men at Oxford and Cambridge, whose intellectual achievements in various fields are among the chief glories of England. Of these Cambridge claims Bacon, Harvey, Milton, Barrow, Newton, and Bentley. But the following century furnished the nadir to the zenith of its predecessor. Professor Jebb makes no defense of the academic shortcomings of the eighteenth century, although he asks us to remember that the atmosphere of the time was not one to give encouragement to large aspirations or lofty ideals. When the present century opened reform was demanded. The universities had not kept pace with the great expansion in science and literature. Such instruction as they did give was limited to certain classes of society. Since 1850 both of these defects have been remedied or at least mitigated. And to-day, by placing themselves in

touch with the other and more widely diffused educational agencies of Great Britain, the universities are making a new bond between themselves and the nation.

N. M. B.

The Pedagogical Seminary—Edited by G. STANLEY HALL, Ph. D., LL. D., President of Clark University and professor of psychology and education. Vol. ii, Nos. 2 and 3, March and December, 1893.

The main object in calling attention to the most recent issues of the *Pedagogical Seminary* is to assist in securing for it a wider support from the serious and scholarly teachers of the country. It is a source of pride that the broadest and most scientific educational journals in the world are published not only in the English language, but from American universities. Rein's new *Zeitschrift*, the *Revue Internationale de l'Enseignement* and the *Revue Pédagogique* are by far the best of the European publications, yet each of them serves a special interest or type of school. The London *Journal of Education* is excellent, but it is in a sense an educational newspaper rather than a scientific organ; though it is doubtless true that it is accomplishing more for educational progress in England, things being as they are there, than if it were of a less popular type. The American journals of the first rank, though very few in number, are both scientific and catholic,—perhaps an unnecessary characterization, for the truly scientific spirit is always catholic,—and they are doing more for the systematic study of educational theory and the improvement of educational practice than any of their European contemporaries. Indeed this fact is not infrequently admitted in Europe itself.

This being the case, the men and women of sound training, who teach because they believe in teaching, are the natural constituency of the scientific and scholarly educational journal, and it is their privilege as well as their duty to support it. That the *Pedagogical Seminary* has not been properly supported by teachers at large is an open secret. Such a state of affairs ought not to exist, and, so far as the EDUCATIONAL REVIEW has it in its power, will not exist longer.

The two numbers under notice make up a volume on child-study, that side of education which is now engrossing so much attention. Mr. Chrisman's article on "The hearing of children" (pp. 397–441) is perhaps the best paper of all, and may serve as a type of work of this kind. The writer puts

together all that has been done toward the ascertainment of the hearing power of children and its defectiveness, including a *résumé* of the literature of the subject. The writer, however, falls short in a way that seems to be characteristic of the study of education at Clark University—he neither summarizes nor interprets his facts. The latter are conscientiously collected and collated, but what do they signify? To this very natural and obvious question, no answer is given. Some practical suggestions are quoted from other writers (p. 435), but the author himself adds not a syllable.

Of the thirteen other papers that are printed, no one is without its point of interest. Those by Miss Williams and Miss Wyckoff gain added value from the fact that both women are known not only as close observers but as teachers of unusual power.

It seems to the present writer that the book reviews and summaries of literature published by the *Seminary* are not quite what they ought to be. Many of them are evidently the work of mere tyros and have no value whatever. Others suffer from lack of proportion. Many of the works noticed have been long before the public, and take space that more recent publications may properly claim. At the same time, these notes and reviews contain a vast amount of information that is important.

In view of the fact that the Teachers College of New York has maintained for years a school of the kind described on pp. 188–89, and is now erecting a series of buildings to accommodate it that represent a greater outlay than the endowment of many an American "university," it is just a little curious to find the editor making a vigorous plea for funds with which to endow a "model school," and "educational experiment station," at Worcester, on the ground that "nowhere" does such an institution exist. In fact, citizens of New York City will shortly have invested nearly a million of dollars in just such an undertaking, and when the new buildings for it are completed and occupied, it will not be easy to find fault with them or their contents on pedagogical grounds. But the passing over all this is only one feature of that inexplicable turning away from American educational institutions and administration that has already been remarked in these pages.[1]

[1] III : 188.

The later issues of the *Seminary* are better printed than the earlier ones, though the number of blunders and misprints is still shockingly large. But despite such failings as have been noticed, the *Pedagogical Seminary* must find a place in every educational library worthy of the name.

N. M. B.

English Miracle Plays, Moralities and Interludes—Specimens of the pre-Elizabethan Drama edited, with an Introduction, Notes, and Glossary, by ALFRED W. POLLARD, M. A., St. John's College, Oxford. Oxford: At the Clarendon Press, 1890, pp. lx, 250. Price $1.90.

The English Religious Drama—By KATHERINE LEE BATES. New York: Macmillan & Co., 1893, pp. 254. Price $1.50.

Those who either as teachers or students have devoted their time to the pre-Elizabethan drama know how difficult it has been to secure proper books for study, especially if the private reprints of societies and costly limited editions of the dramatic literature of this period were inaccessible to them. This alone is sufficient excuse, if there need be one, for the appearance of two new books upon the early English drama. The teacher will find ample reasons for acquitting the authors of any such charge as book-making.

The two above works are in no sense rivals. Mr. Pollard's *English Miracle Plays* furnishes the student with a carefully selected series of specimens together with an introduction, a most modest name for an historical outline of the early dramatic literature of England, an exhaustive set of notes upon the specimens, and a copious glossarial index to the same. This is the work of a student and for the student. The author of *The English Religious Drama*, on the other hand, has supplied the general reader with a series of lectures or essays which are admirably planned to interest and guide him in his further researches into pre-Shaksperean drama. Five lectures and an appendix make up Miss Bates's book.

The first lecture is entitled Passion Plays and Saint Plays, plays which are not English in language and almost lost to view in the dim obscurity of the Dark Ages. Historically speaking, however, the drama of England had nothing in common with the play of Christ's Passion and the comedies of Hroswitha, the nun-playwright of Gandersheim. These are only milestones along the highway running in a straight line from the Roman stage to the altar of the Roman Catholic

Church. To reach that earliest dramatic presentation on Good Friday you must pass along this highway. Coming to speak of the sacred drama of England, however, we have to leave the problems of the earlier centuries of dramatic evolution behind us and place ourselves after the date of the Norman Conquest, about the close of the eleventh century. For the drama had already passed its liturgical stage and was now presented as a miracle play. Not the strict miracle play, for that, according to Ward's definition, would then be "concerned with incidents derived from the legends of the saints of the Church." The play in honor of St. Katherine and Hilarius' plays on Daniel, on the raising of Lazarus, and on St. Nicholas are, for purposes of classification, miracle plays. But the author prefers to call them Saint Plays, thus adding confusion to terminology. Of course, this rounds out chapter i. and allows space for chapter ii., which must necessarily receive the lion's share of the book, for nearly all English religious drama may pass under the title of miracle plays or mysteries. If any division was necessary, the date of the Norman Conquest would have been a legitimate one.

The miracle plays are next discussed under three heads: description, enumeration, and dramatic values. These three lectures are the most interesting and instructive in the book. Naturally so, for they treat of the four chief cycles of plays: the York, Townley, Chester, and Coventry. These plays present many problematic features: the question of sources, their relative antiquity and dramatic values, their dialect and structure. All these might have been so many "values," yet the author has chosen to limit her lecture to one value, the dramatic. And of the four great cycles the York Plays are the most interesting. In the first place, they number forty-eight, and as Mr. Pollard states it, "From whatever point of view we regard them, whether as to antiquity, length, or serious interest, the York Plays, which have been the last to receive the honors of print, have the first claim on our attention." Yet for the lecture entitled Presentation Miss Bates has selected the Townley Mysteries. These are sometimes called the Widkirk or Woodkirk Plays. It is easy to understand why they were chosen. To catch the attention of the reader or hearer nothing is better calculated than the grotesqueness, wit—in a word, all the dramatic attributes—of this cycle. And in this chapter the writer has described so graphically

how "to the souls on the right and to the souls on the left their dooms are meted out, and while the demons seize upon their victims, with scoff and threat, the saints sing the Te Deum, and the last pageant carriage, leaving behind it pale faces and quivering nerves, rolls out of Wakefield market-square and on from street to street until the evening falls," that we too feel as if we had been present at an English Oberammergau.

The chapter entitled Enumeration is only a continued, brief description of the York, Chester, Coventry, Cornwall, and Dublin cycles, together with the isolated pageants extant, of which last the so-called Digby Mysteries are the most important. Under the third discussion upon the Miracles are considered the dramatic values. We now have a look at the "stuff of these old miracle plays." When it is a question of sources, "the Keltic peoples, as a rule, gave in their Mysteries more place to fable, while the Teutonic held more closely to the Biblical text." The material then was Biblical history, the theme the Christian faith. Upon the liturgical dramas of Christmas, Good Friday, and Easter the structure of the sacred drama was raised, and its design was realistic. Dramatic and architectural art have many "values" in common. In this lecture the rapid development from the mediæval dramatic chaos into the Elizabethan dramatic cosmos has been sketched in an entertaining and scholarly manner.

Lecture V., upon the Moralities, closes the series. "The very word [Moralities] is like a yawn." It is a yawn in two senses of the word. For the general reader, true enough, the matter is devoid of interest, and the historian finds a troublesome gap in the stages of dramatic evolution. How the Morality was evolved is a debated question for which these two books offer no new theories. That they may be readily distinguished from the Mysteries, miracle plays, is sufficiently manifest. The Moralities, as defined by Ward, teach and illustrate the same religious truths as the miracle plays, not by direct presentation of scriptural or legendary events and personages, but by allegorical means, abstract figures of virtues or qualities being personified in the characters appearing in these plays. The Moralities were not the direct forerunners of the Elizabethan drama, those are to be found in the Miracles. The Moralities in themselves contained the germ of death to the drama; for personification, when didactic and unreal, becomes undramatic to the highest degree. The Morality was

to the drama what the allegory was to the mediæval epic. But passing into the Interlude the Morality formed for itself another manner; it seems indeed to have enjoyed a large share of popularity. To follow the Interlude would be to pass into the reign of Elizabeth, and our author does not carry the discussion to these limits.

I must now turn to Mr. Pollard's introduction, which is richer in historical facts, but written along the same lines as the book already noticed. As has been said, Mr. Pollard's work is planned for the student, not for the general reader or hearer. It has none of the landscape gardening of Miss Bates's book. Besides the introduction abounding in data it contains a co-representative collection of specimens, taken from all the cycles, with notes and glossary for the same. In discussing the sources of the York Plays Mr. Pollard has overlooked the complete dissertation upon the same subject by P. Kamann, *Anglia*, Bd. X. (1887–88). Mr. Kamann conclusively shows that the sources of the York Cycle are (1) the Hieronymian translation of the Bible, *i. e.*, the Vulgate; (2) several of the pseudo-evangels.

As a reference book Mr. Pollard's *English Miracle Plays* would have been more useful to the student had the author added to it Professor Stoddard's *References for Students of Miracle Plays and Mysteries*, published in the Library Bulletin, No. 8, of the University of California. This same exhaustive list of the plays has been largely drawn upon by Miss Bates for the appendix to her lectures. These lectures, in turn, would have been greatly enhanced by a topical index. As they stand, the reader has only the titles of the chapters to guide him.

The study of the pre-Elizabethan has been materially aided by these two books. Scholars now look forward to the new editions of the Towneley Mysteries and the Macro-Moralities, and to the reorganization of the Society for the Publication of Shaksperean Literature. It is most desirable that the object of this Society will not exclude pre-Shaksperean literature. A review of the two above works will increase our interest, not to speak of knowledge, in the later drama of England.

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EDITORIAL

As published by the Bureau of Education the Report of the Committee of Ten is an octavo volume of 250 pages. Of this number fifty-eight pages are taken up by the Report proper, three by a statement made in explanation of his signing the Report by President Baker of the University of Colorado, and the remainder by the reports of the nine special conferences addressed to the Committee of Ten. The demand for the report is very large, and already requests for it are being received from leading students of education in Europe. Several faculties of colleges and secondary schools have begun the systematic study and discussion of the committee's recommendations, and before another year rolls round they will be found in force at various points throughout the country.

President Baker's explanatory note, which is hardly a minority report, raises the question of the equivalence of subjects in education, his text being three or four passages from the Report. On the view that he takes, the nature and value of the content of any knowledge is of controlling importance in estimating its educational value. Otherwise, as President Baker says, education becomes a purely formal process. With this opinion the EDUCATIONAL REVIEW and, we suspect, the Committee of Ten themselves cordially agree. The point, however, is not raised directly in the Report, though President Baker does not propose to allow it to drop out of sight.

Superintendent Hailmann of La Porte, Ind., who has accepted the appointment by the President to be Supervisor of Indian Schools, is fully equipped for the post. Mr. Hailmann's thorough understanding of the principles of education, his long and successful experience as a teacher and superintendent, and his earnest zeal in school work will all assist in making his administration successful. The country may well congratulate itself that, despite the downward political tend-

encies of the present, a genuine educator and not a politician has been put in charge of the Indian school system.

Professor Münsterberg of Harvard has been in America only eighteen months, but in that time he has acquired more and more accurate information about American colleges and universities than is in the possession of the average president or professor of those institutions. In an article of great interest and value, published in *Der Westen*, a Chicago journal, for December 3 last, Professor Münsterberg explains the American university system to his fellow-countrymen in a most admirable manner. Professor Münsterberg was moved to write the article by the fact that very slurring and inaccurate accounts of the American educational system were published in Germany by the thousand and one reporters who were sent out to visit the Chicago exhibition. As Professor Münsterberg says, American universities are hardly to be treated like such subjects as sleeping-cars and ice cream, and he denounces the published accounts as an insult to German thoroughness and German justice. One statement in particular is made the text for all that follows. This was: "American universities are nothing more than high schools. They are much too young to be anything more yet. [Harvard is 175 years older than Berlin, and Columbia 117 years older than Strasburg!] Scientific research and scientific demonstration are unknown at American universities. The professors simply teach, basing the instruction on text-books; they are not independent investigators. Whatever is done in America by way of research is done by men not connected with the universities." This judgment, says Professor Münsterberg, is based on the most astounding ignorance and is false word for word.

He then proceeds to state what American colleges and universities are, in terms of institutions familiar to Germans in their native land. The Harvard freshman is on a par with the boy who has attained to the class known as Ober-sekunda in a German gymnasium. That this stage is reached at an age a year or two greater than is usual in Germany is ascribed to our social conditions and the weakness of the earlier instruction. In his junior year the Harvard student reaches the point marked in Germany by the *Abiturienten-examen.* The German boy at this point knows more Greek and more history

than his American contemporary, but the latter has the advantage in respect of philosophy and political economy. So it happens that the senior year in college is equivalent to the first two semesters at a German university. The *Philosophische Fakultät* corresponds to the Harvard graduate school plus the senior college year. At Harvard nearly seven hundred students are enrolled in the two, a number surpassed by no German university save those at Berlin and Leipsic. Munich and Halle have only about five hundred each. The Harvard doctorate examination in philosophy is asserted to presume a more advanced stage of scientific culture than the average doctor's examination in Germany, and to approach more nearly to the *Habilitations-examen.*

Yale, Columbia, Michigan, Pennsylvania, Chicago, and one or two others, are said by Professor Münsterberg to conform more or less closely to the Harvard type. Clark has no *gymnasialartiger Unterbau*, and Johns Hopkins has one only in part. Most of the other institutions correspond, in their four years' courses, to *Sekunda* and *Prima;* some few to *Tertia* and *Sekunda.*

Professor Münsterberg then takes up the question of research, and incidentally points out—what is undeniably true—that the American universities far surpass the German as teaching institutions. The seminary method is fully developed and much used in America. Taking a single subject, psychology, Professor Münsterberg shows how numerous and how admirable are the research laboratories in this country. Fourteen of these laboratories have grown out of the small beginnings made by Hall in Baltimore and Cattell in Philadelphia about a decade ago. The Harvard laboratory alone is better equipped than all those of Germany taken together, that of Wundt in Leipsic included. Every one of the fourteen American laboratories is carrying on researches and publishing the results. Of all places in the world at which to obtain a scientific introduction to the study of philosophy Berlin is said to be the best and Harvard to rank next. It would, in our judgment, be more accurate if this order were reversed.

It would take too long to follow Professor Münsterberg through his entire article. Enough has been said to prove the accuracy of his information and the catholicity of his tone. The German universities have done so much for science that their educational value and perfection are often greatly over-

estimated, especially by devout admirers on this side of the Atlantic. We are often urged to copy slavishly their organizations and methods. If we do, we shall wipe out completely what is a most promising beginning of university development.

Dr. D. L. Kiehle of Minnesota, president for the year of the department of superintendence, has arranged a very attractive programme for the Richmond meeting. The sessions will open on the morning of Tuesday, February 20, and continue until the evening of the 22d. Eleven important topics have been selected for discussion, and they cover a wide field. They are: Some phases of present educational problems in Europe; the adaptation of libraries to public school uses; the South and its problems; the improvement of teachers now in the schools; enriching the elementary courses; the university in its relations to the teaching profession; the improvement of teachers in rural schools; the care of truants and incorrigibles; education at the Columbian Exposition; the Report of the Committee of Ten; the kindergarten in its relation to the public school system.

There is every prospect of a large attendance and a meeting of unusual interest.

One of the greatest obstacles to progress in the educational work of this country is that elementary school text-books in general use have been written for the most part by men of meager scholastic attainments, without philosophic insight, and of small literary skill. Many of the most successful school-books—successful from the pecuniary, that is, the publishers' standpoint—are inaccurate in statement and written in bad English. The reason is to be found in the low grade of scholarship and teaching skill required on the part of teachers. The teacher who does not know how to teach, has his pupils memorize the words of a text-book. The children "recite" lessons; the teacher "hears" lessons. The book that lends itself most readily to this treatment, the book that is arranged in paragraphs suitable for memorizing, is, or has been, the financially successful book. Evidences are not wanting, however, that the days of such teachers and such text-books are

drawing to a close. Text-books adapted to rational methods of teaching are now finding a ready sale. Teachers are studying the science of education and acquiring better methods of teaching. And publishers, though they still print and sell all conceivable rubbish in the shape of school literature, and still derive the greater part of their profits from its sale, are waking to the necessity of supplying the demand created by the introduction of better methods of teaching. Many gentlemen of distinguished attainments in special lines have prepared, particularly in history and the sciences, text-books that may fairly be regarded as worthy of use by the best teachers. On the other hand, it must be admitted that most great scientists and most great men of letters have not taken the trouble to make themselves acquainted with the science and art of education. In so far as this is the case they are unfitted for the task of writing school text-books. The preparation of a good text-book requires a union of scholarship, literary skill, and pedagogical knowledge that is seldom found.

But suppose there were an adequate supply of properly prepared text-books, the task of securing their general use in schools would still remain. To their entrance many obstacles, strange as it may appear, are interposed. There is the schoolmaster who can see no good in any schoolbook except the one he learned by heart forty years ago. There are the members of the board of education or the school trustees, who know nothing about the merits of school literature, nothing about the developments of principles and methods of teaching, yet who, in most places, are charged by law with the duty of selecting text-books. And, greatest obstacle of all, there are the publishers who regard schoolbooks as so much merchandise—the less expensive the manufacture the greater the profits—and their agents whose living depends on their skill, not as educators, but as drummers. It is well known, of course, that all publishers and all agents are not of this character; but whoever has heard book-agents, in moments of confidence and conviviality, tell their stories of how they manipulated unsophisticated schoolmasters and ignorant school trustees, has listened to one of the saddest tales of public school life. The selection of our children's mental food while they are at school, instead of being made by the highest wisdom and wisest discrimination, is the subject of petty political intrigue, base deception, and sometimes barefaced bribery. When will the

time come when text-books for public schools shall be selected only by experts? If that time ever does come, text-books will be written only by the man of letters who is also a schoolmaster, or the schoolmaster who is also a man of letters.

That the kindergarten movement is growing in strength and popularity is shown by the fact that, during the past school year, the board of education in St. Paul, Minn., established no less than eighteen kindergarten schools. Superintendent Gilbert expresses the hope that there will soon be a kindergarten class in each school building, "for," he adds, "the testimony of parents, principals, and primary teachers is that the children who have been in the kindergartens show more marked and rapid advancement than any others." The influence of the kindergarten is not confined to the pupils directly under instruction; its spirit follows them through the school course and pervades every department. On this point Superintendent Gilbert's testimony is most instructive: "Not only have the kindergartens been beneficial to the children in them, but their spirit has pervaded the school system. The discipline is gentler and more wholesome. More and more the teachers are giving their attention to the moral and intellectual improvement of the child, through interest and influence, and less to technicalities and arbitrary rules."

St. Paul is also a city in which the agitation for the shortening and enriching of the grammar school course, commenced not more than three years ago by President Eliot, is bearing fruit. During the past year algebra and geometry have been introduced into the grammar school course. In Brooklyn, N. Y., algebra and its application to arithmetic are now taught during the last two years of the course, while "inventional geometry" is taught during the last year and a half.

It is strange that in St. Louis, the city which took the lead in the incorporation of the kindergarten as part of a system of public schools, the minimum age for the admission of pupils still remains at six years. It is now a generally accepted opinion that the time for kindergarten work, pure and

simple, ends in the case of the average child with the completion of the sixth year. If our children are to derive the full benefit from kindergarten training, they should be brought under its influence at least as early as five years of age. The support of the public schools must become much more generous than it is, however, before it will be possible to receive four-year-old children in public kindergartens.

The second annual meeting of the Headmasters' Association, a body of representative principals of the great secondary schools of New England and the Middle States, was held at Columbia College, December 28 and 29. The discussions, of an intimate and informal nature, anticipated largely the views set forth in the Report of the Committee of Ten and of its subsidiary committees, on which a number of the members of the Association had served. Recommendations pointing to the desirability of a much wider course of reading in Latin and Greek were offered by Messrs. Collar and King; a plea for a more extensive course of historical study, in which the text-book was to give way largely to *viva-voce* narrative by the teacher, was urged by Messrs. Warren and Sachs; the advisability and possibility of an early introduction of French into the grammar schools was maintained by Mr. Tetlow; and a valuable exposition of the best methods of teaching Latin and Greek composition was furnished by Messrs. Daniell and Coy.

The value accruing to the efficiency of schools from the skillful conduct of teachers' meetings formed the burden of Dr. Keep's suggestions, and a paper on school patriotism by Rev. Endicott Peabody brought into strong relief the claims of the ethical side in the life of a great school. The meeting, over which Dr. Bancroft of Andover presided, brought into closer relationship the men in whose hands the advance of secondary education largely lies.